ESSENTIALS OF ACCOUNTING

THE MACMILLAN COMPANY
NEW YORK • CHICAGO
DALLAS • ATLANTA • SAN FRANCISCO
LONDON • MANILA
THE MACMILLAN COMPANY
OF CANADA, LIMITED
TORONTO

ESSENTIALS OF ACCOUNTING

By WILLIAM A. PATON
PH.D., C.P.A., LITT.D.
Professor of Economics
and
Edwin Francis Gay University Professor of Accounting
University of Michigan

REVISED EDITION

New York THE MACMILLAN COMPANY

PRINTED IN THE UNITED STATES OF AMERICA

PREFACE

LIKE THE EARLIER EDITION, this book is designed primarily to furnish material for a thoroughgoing course in accounting principles at the college or university level. The treatment of the subject, the author believes, will be found sufficiently intensive to provide a satisfactory foundation for advanced and specialized courses, and at the same time sufficiently comprehensive to meet the needs of those for whom accounting is an ancillary field. It is also hoped that the book will prove useful to readers other than college students who wish to have a complete statement of fundamentals available for study or reference.

Notwithstanding the fact of increased governmental interference in economic affairs the position must still be taken that the accountant is especially concerned with the private business enterprise and the points of view of owners (investors) and their representatives. The corporate form of organization, the dominant mode of business activity, is emphasized, as thus far accounting has reached its highest development as an instrument of corporate administration. The conception of the effects of periodic operation evolved mainly in the industrial field is endorsed — a conception which may be applied harmoniously to the problems of accounting in all lines. This shift from the traditional engrossment with the conditions of the small trading concern is clearly desirable in view of the growth of manufacturing and the long strides made by the cost accountant.

In the eleven years since the first edition appeared accounting principles and procedures have been subjected to active discussion and criticism by professional accountants, teachers, and other groups. There have also been developments of significance to accounting on the governmental front — particularly in taxation and in the utility field. Of special importance is the increasing awareness of the limitations of conventional accounting in the face of severe and sustained change in the general price level (or in the value of the dollar, as one pleases). In preparing this revision it has of course been necessary to take these factors into consideration. Some of the recent suggestions for improvement in terminology have been

adopted; for example, the substitution of the expressions "position statement" and "retained earnings" for "balance sheet" and "earned surplus," respectively.

With the collaboration of Professor R. L. Dixon of the University of Michigan and Professor Rufus Wixon of the University of Buffalo an abundance of laboratory exercises and homework has been prepared to accompany this book, separately printed under the title "Problems and Practice Sets for Essentials of Accounting." A teachers' guide is available for instructors using this material.

Through a period of many years the author has been the beneficiary of numerous suggestions from colleagues and others, but the list of those who have in this way aided in the development of the "Essentials" is too long to present here. A specific acknowledgment is due the Burroughs Adding Machine Co. for furnishing a substantial number of the illustrative forms used in this edition.

WILLIAM A. PATON

CONTENTS

ESSENTIALS OF ACCOUNTING

I

INTRODUCTION

Function and Sphere of Accounting. In a broad sense accounting has one primary function: facilitating the *administration of economic activity.* This function has two closely related phases: (1) *measuring* and arraying economic data; (2) *communicating* the results of this process to interested parties. It follows that the job of accounting is being well done when those concerned are being supplied with significant, essential data, presented and interpreted in such manner as to promote understanding and a realistic, constructive pattern of decisions.

This conception of accounting needs emphasis, particularly in view of the developments of recent years. Accounting, like other fields, is plagued with fetishes and sacred cows, and it is high time that homage be shifted from these to the underlying objective. Where recognition of economic realities runs counter to some convention or tradition, perhaps never soundly grounded, tradition should give way. In other words, tradition should not be worshipped for its own sake. On the other hand it should not be assumed that attacking or disregarding established ideas and practices is a virtue in itself. Good reasons may often be found by which to justify a view or a procedure which has become conventional through long adherence or observance. What is needed is a clear perception of the basic function, and a willingness to review conventional ideas, terms, and techniques in the light of such function.

According to the foregoing accounting permeates the entire economic process, is present wherever economic data are being compiled and interpreted. This is not an unreasonable general view. As a first step in the technical study of this subject, however, it is necessary to narrow the perspective. The unit of economic organization with

which accounting is primarily concerned is the *private business enterprise*. The principal raw materials with which the accountant works are the transactions and operations of the specific concern. The documents, entries, accounts, schedules, etc. and the procedures associated therewith, which make up the mechanism of accounting, deal with the activities and affairs of the particular business undertaking, or a department or other subdivision of such undertaking. The major statements and reports which the accountant presents periodically, and the concepts and analyses on which these are based, are peculiarly applicable to the conditions of the business enterprise and reflect the distinctive problems growing out of business activity. In other words, accounting has been developed most fully in the field of organized business, under private ownership and management, and the structure of accounting has been built up largely on the basis of the characteristics of business entities and the needs of the parties who provide the funds and are responsible for administration.

Boiling down these comments on function and sphere, the essential purpose of accounting may be said to be that of *compiling and interpreting the financial data of specific business entities in such manner as to provide a sound guide to action by management, investors, and other interested parties, and to secure equitable determinations of rights in the light of prevailing standards of economic conduct and relationships and with due regard for long-run as well as short-run considerations.*

Nature of Business Enterprise. A business enterprise is a distinct economic activity involving the production and marketing of some commodity or service. To rate as an enterprise the activity should be relatively sustained and should require the commitment of an appreciable volume of capital. The ownership or investment may be represented by a single individual or interest, or by a group of individuals or interests. The essential object of the typical concern is earnings, and hence a fundamental feature of the work of the accountant is the disclosure of periodic income.

Business enterprises vary greatly in character, not only because of the differences between the various fields but also because of differences in size, methods of operation, scheme of organization, etc. The main fields involved are extraction (agriculture, mining, etc.), transportation (railways, shipping, airways, pipe lines, etc.), manufacturing and converting (with innumerable subdivisions), construc-

tion, trading (including all wholesale and retail concerns), finance (banking, insurance, investment, etc.), utilities (electric energy, gas, water, etc.) and personal service (hotels, theaters, laundries, etc.). As might be expected, the problems of ownership and management—and hence the accounting techniques required—differ considerably among the several lines of business activity.

From the standpoint of legal structure and form of organization—a matter of decided importance to the accountant—the principal types of enterprises are the single-proprietorship, the partnership, and the corporation. Among the less important (and often temporary) legal entities representing business activity are syndicates, associations, joint ventures, estates, and trusts.

Single-Proprietorship and Partnership. The single-proprietorship is a business enterprise owned by one individual. The title to the properties used commonly resides in the proprietor, and the capital funds required are usually furnished largely by the proprietor. As a rule the proprietor is the active manager of the business and may also furnish a considerable part of the ordinary services required.

In law the single-proprietorship is not recognized as a distinct entity; that is, from the legal standpoint the business affairs of the owner are not distinguished sharply from his other economic interests and activities. The single-proprietorship is essentially a personal enterprise. Usually no formal steps are required to launch such a business, and there are no special restrictions and conditions under which it must operate. From the standpoint of operating management, on the other hand, the single-proprietorship can best be viewed as a separate business institution—an entity not to be confused with the purely personal interests and transactions of the proprietor.

The partnership is an association by contractual agreement of two or more natural persons in a business undertaking. Partnerships are usually composed of but two, three, or four members, but there may be any number of partners. The partnership is commonly based upon a written agreement called the "articles of copartnership." This agreement regularly contains stipulations in regard to character of the business, management, investments, withdrawals of income or principal, division of income, dissolution, etc.

In the ordinary partnership, as in the case of the single-proprietorship, the law does not view the business as an entity with assets and

liabilities entirely distinct from all other resources and obligations of the partners. As an important consequence of this fact, the partners are subject, jointly and severally, to "unlimited liability." This means that in general any partner is liable for the debts of the business up to the entire amount of his private fortune, regardless of the amount of capital he has contributed to the enterprise.

Most farm establishments are not incorporated, a large percentage of retail stores are single-proprietorships or partnerships, and there are numerous examples in manufacturing and in other business lines. Such enterprises range in importance from the fruit stand on the corner to the private banking house or other large business having an investment of many thousands or even millions of dollars. However, very large aggregates of capital are rarely brought together under the single-proprietorship or partnership form of organization.

In both the single-proprietorship and partnership accounting is of importance from a managerial point of view, but in the partnership an additional consideration arises, the preservation of equity between partners. The rights of the several partners with respect to control, income, capital, and so on, may vary widely; hence a failure to keep a careful record of all transactions and to provide periodic statements of income and financial condition may result in the exploitation of one owner to the advantage of another. The need for complete accounting under these circumstances is so acute as to make it advisable that the essentials of the system to be followed be definitely prescribed in the written articles of agreement.

Corporation. The corporation has become in many respects the most important form of business organization. In point of total capital controlled, number of employees, quantity of output, financial influence, etc., the corporation easily leads in many lines of industry. In mining and manufacturing, in transportation and throughout the public utility field, in banking, insurance, and other financial lines, the corporation is the dominant form of enterprise, and most large-scale undertakings in all fields are conducted under the corporate form of organization.

The corporation, like the firm, represents an association of individuals or interests who have joined their funds in a business undertaking with the hope of making earnings. It has, however, certain distinctive and important features. In the first place it should be emphasized that the law views the corporation as an entity, separate

and distinct from its members. It is the *corporation* which has title to the properties, employs labor, buys goods, and so on, rather than the individual members. Those who furnish capital are investors rather than proprietors in the narrow sense. "Limited liability" is a very important consequence. Since the corporation constitutes an independent legal entity its assets and liabilities are separate from the private resources and debts of the individual investors. Accordingly the corporate investor in general risks only the amount invested (or the "par" or formal value of his investment).

In the second place corporate ownership is divisible and readily transferable. The corporation acquires its capital primarily through the issue of negotiable securities. Of these, *capital stock* is the fundamental type, the security which evidences corporate proprietorship in the strict sense. The total authorized capital is divided into a specified number of parts or "shares." Few companies, even among small local corporations, have less than a thousand shares; the number of shares in the large corporations runs into the millions. Corporate shares in general may be transferred from holder to holder without limitation, and in the case of securities listed on the exchanges such transactions are of frequent occurrence. The interest of each stockholder is evidenced by a certificate (or certificates) showing the number of shares held and other data. The total of the capital stock outstanding constitutes the formal expression of the ownership of the stockholders as a body.

Some companies secure a considerable part of their capital by long-term borrowing, that is, through the issue of contractual securities. The most important security of this type is the bond. A bond issue is likewise divided into a more or less considerable number of smaller units, although these need not all be of the same denomination. Bonds, like stocks, can be transferred from holder to holder.

The specialization of corporate securities is often carried beyond the simple stock-bond division. Many types of stocks and bonds are employed in modern corporate finance. Even in the single corporation are occasionally found three or more classes of stocks and several kinds of bonds and notes, each with its own special rights and privileges with respect to income, principal, financial control, and other aspects of corporate ownership and administration.

Accounting is especially needed in corporate enterprise. Large size and complexity of operations, conditions characteristic of corporate activity in many cases, require the application of accounting

procedures. The division of ownership into numerous units, and possibly into several types of securities, coupled with ease of transfer of rights, makes accounting for periodic income and financial condition imperative as a means of preserving equity among the various parties and groups. The separation of those who furnish capital from active participation in administration calls for systematic reporting of stewardship by those to whom authority has been delegated.

Other Situations Requiring Accounts. There are several types of situations other than the typical business enterprise which require something in the way of accounting. The individual often has a considerable estate in the form of residence, automobiles, furniture, and other forms of consumers' goods; he may own government bonds or other securities; in addition to his earnings from personal services he may receive royalties, interest, and other property income. Systematic accounting for all such cases is desirable from the standpoint of sound administration of affairs and as a basis for the income-tax return. The fact that personal resources may be readily converted into business assets through sale, or may be made the basis of borrowings, emphasizes the importance of maintaining complete records of all property.

Family budgeting and cost accounting are often urged as aids in the administration of the affairs of the household. The home is a complex economic institution, with financial and managerial problems somewhat similar to those which arise in the operation of the business enterprise, and careful handling of family finances and effective utilization of resources can undoubtedly be promoted by the use of systematic records and analyses. Thus far, however, the practical application of these devices in this field has been rather limited.

The professional man requires accounting records. At the least he must keep a careful record of receipts from clients and balances due, and in numerous cases it is advisable to go much beyond this. In the case of the personal-service firm or company, using considerable capital in the form of office furniture and equipment, cars, and current funds, and perhaps employing several assistants, virtually all of the essential characteristics of the typical business enterprise are present and a complete accounting system is needed.

In all border-line cases it is important that the distinction between

purely private or personal transactions on the one hand and business affairs on the other be carefully observed. In particular the cost of obtaining income (business expense) must not be confused with the utilization or expenditure of income ("living expense"). For example, the cost of operating an automobile which is used in part for business purposes and in part for personal or family purposes must be allocated between these two types of charges in ascertaining periodic business earnings.

The governmental unit—federal, state, and local—is an important illustration of an organization outside the field of the business enterprise proper which requires accounts. A government may own a considerable amount of fixed property, handle large sums of cash, carry on extensive commercial and other activities, be obligated to pay debts. Under these circumstances a highly developed system of accounting is evidently needed.

There are, finally, many classes of private organizations other than ordinary business enterprises which make use of accounting. These range from religious, philanthropic, and scientific societies (organizations which show little similarity to the typical business) to cooperative and mutual marketing and financial associations (entities which have much in common with the commercial concern).

Factors Contributing to Emphasis on Accounting. Accompanying the development of large-scale corporate enterprise are a number of other factors contributing to the present-day emphasis upon accounting. One important factor is found in the advent of high-level income taxes, particularly those levied by the Federal Government. With the imposition of heavy taxes on periodic net earnings the businessman has found it imperative that earnings figures be ascertained with a high degree of accuracy and consistency. Income-tax rulings, moreover, have a marked influence on theories of valuation and income measurement and on the interpretation of the effects of various complex business transactions and situations. The official adoption of a particular view or method of procedure for tax purposes tends to mold the opinions and practices of accountants and their clients. Unfortunately tax decisions do not necessarily reflect good economics or accounting. In a few important tax cases conclusions have been reached that are indefensible.

Increasing public control of industry is another factor which has had a substantial influence upon accounting. In the field of utility

regulation, notably, it has long been recognized that accounting must be relied upon to furnish much of the information needed by the control agencies, and uniform systems of utility accounts have been prescribed by both Federal and state regulatory bodies. The effect of such prescribed accounting has been constructive in some measure, but the inflexibility introduced is somewhat objectionable and the prescribed systems include arbitrary features which most accountants consider to be very questionable.

The activities of the Securities and Exchange Commission, and the various state securities commissions, represent another type of regulation of special interest to accountants. The operation of these bodies in their work of controlling the issuing and marketing of corporate securities requires extensive use of accounting data, and the resulting specific decisions and established rules undoubtedly tend to modify methods of compiling and presenting such data.

Among other factors bearing upon the development of accounting in recent years is the active interest in this field shown by the "trade" associations. Many of these organizations have, through the instrumentality of special committees, prepared standard systems of accounts designed to meet the needs of individual members and also to facilitate compilation of data for the association. Mention may also be made of the accounting requirements of the New York Stock Exchange, the increasing stress on certified statements by banks and other financial institutions, and the work of the major rating and credit organizations.

Accounting Practice. The practice of accounting is usually viewed as having two main subdivisions, (1) public accounting and (2) "private" accounting. Public accounting has now achieved full-fledged status as a profession. All of the states have passed acts prescribing the conditions under which one may become a "certified public accountant" and the total number of CPAs in professional practice is now estimated to have passed the 30,000 mark. The field of private accounting is less professional in character, but there are a great many individuals in the employ of corporations and other enterprises—as comptrollers, general auditors, and chief accountants—of professional caliber, and there are several large and influential organizations in this area.

An important branch of the practice of accounting consists of the construction and organization of the forms, records, books, devices,

and procedures which constitute the framework of the particular accounting system. Such a system, of course, is often the result of a gradual development in response to the changing conditions and needs of the enterprise rather than the conscious creation of a particular person or persons. Nevertheless a considerable part of professional accounting practice consists of the construction of accounting systems, the modification and improvement of systems already in existence, and the appraisal of the effectiveness of procedures and controls employed. The development and evaluation of accounting systems is an art which requires a high degree of familiarity with the details of business conditions and procedures in particular fields, and the exercise of common sense and resourcefulness in dealing with the specific case, as well as a thorough knowledge of the underlying principles of accounting.

Bookkeeping may be defined as the systematic, orderly recording of business transactions by the "double-entry method." Each transaction or event which affects the financial status of the enterprise must be resolved into "debits and credits" and must be properly registered in the accounts. Double-entry bookkeeping is thus an essential first stage in accounting, broadly conceived, and not a separate and distinct field. The preparation of statements and all other work of interpretation is based in considerable measure upon the records prepared by the bookkeeper. It should be understood that bookkeeping, in the best sense, is more than mere recording. The process of transmuting the raw data of business operation into accounting entries—in part at least within the province of the bookkeeper—requires an understanding of the nature of the many types of transactions involved and the exercise of judgment all along the line.

The most important phase of the art of accounting is found in the periodic analysis and interpretation of accounts, the final result of which is the presentation of position statement, income statement, tax return, and all special statements and reports for the use of the management, investors, and others concerned. This is the most distinctive part of accounting. The accountant is peculiarly an analyst, an interpreter. It is his task to draw from the underlying records significant conclusions with respect to revenues, costs, net earnings, resources, liabilities, and other important financial elements; it is his function to translate the mass of available data into effective managerial and ownership information. In this field lies much of the work of the professional accountant.

This phase of accounting requires the use of important information not furnished directly by the accounting records. Inventories of merchandise, valuations of fixed assets, and other similar data are needed to supplement the figures resulting from routine recording. Discovering and marshalling these value facts may be only in part the work of the accountant, but it is clear that the accountant must be thoroughly familiar with the principles and procedures by which the data are obtained and must thoroughly understand their implications. The close relationship between valuation and accounting has come to be widely acknowledged, and it is not unreasonable to give the principles of business valuation a place in the theory of accounting.

Checking and verifying the accounts of others, especially with a view to preventing or disclosing fraud or other irregularities, is a significant part of public accounting. It is a type of work in which success depends upon experience, ingenuity, careful procedure, and accuracy, as well as upon a knowledge of underlying principles. However, while verification was originally a major function of the public accountant, he has today assumed numerous other and perhaps more important duties, almost all of which are often loosely comprehended under the term "auditing." In addition to the preparation of regular financial reports and analyses the public accountant is nowadays called upon as a consultant and investigator in a wide range of problems and situations, including business organization, receiverships and liquidations, tax cases, appraisals, rate cases, etc.

Ascertaining and controlling costs is a more or less distinct field of accounting, a field which has developed very rapidly in the past few years. Originally deemed applicable primarily to the manufacturing field, and to production or factory costs, the principles and techniques of costing are now in process of being applied throughout the business field. The essential problem of the cost accountant is that of measuring and assigning costs of operation with respect to processes, products, departments, territories, and other centers of managerial interest, and a considerable body of special theory and statistical procedure has been built up in this connection. One of the worth while by-products has been marked improvement in procedures for handling and recording materials and supplies.

Formerly associated principally with governmental finance and operation, budgeting has become a recognized feature of management in private business, particularly in the case of the larger enter-

prises. By budgeting is meant systematic planning, in financial terms with respect to future operations, and budgetary procedure consists of the technical process by which budget estimates are formulated and utilized in controlling business operation. Budgeting involves the preparation of coordinated estimates of revenues and costs (classified in such detail as is desired), plant and equipment extensions and improvements, cash receipts and disbursements, and—in some cases—complete financial statements for one or more future fiscal periods. Such estimates are founded, in considerable measure, upon the accounting records and reports which show past performance, and can be no more dependable than the underlying data. Further, from time to time the estimates must be compared with current performance and revised in the light of changing conditions; and this requires a sensitive accounting system which furnishes accurate reports at fairly short intervals and without serious delay.

Relation of Accounting to Other Fields. If the accountant is to render the highest possible type of service to the business community he requires a thorough knowledge of the fundamentals of economics. Of especial importance to him—in view of their bearing upon the valuation problems arising within the domain of the particular enterprise—are the "laws" of market price. That is, the concepts and lines of reasoning developed by the economist in the field of price determination are distinctly helpful to the accountant in his efforts to formulate a sound basis of approach to the concrete problems of revenue measurement, cost analysis, depreciation, intangible values, etc. At the same time the contrast between the typical approach of economics and that of accounting should be clearly recognized. The economist as a rule adopts the general or social point of view; he looks at the economic fabric in terms of communities, economic groups, markets, industries, basic functions and factors, and general policies. The accountant, as has been emphasized, is concerned primarily with the activities of the particular enterprise and the interests and needs of its owners and managers. Failure to recognize this contrast has been largely responsible for the persistence of the mistaken idea that in the accounts of the business concern explicit allowance must be made for all factors which are viewed by the economist as price-influencing costs of production, whether or not they are actually incurred by the particular enterprise.

The law is another field closely related to accounting. The ac-

countant is engaged in analyzing and recording business transactions from the standpoint of effect upon the financial condition of the particular enterprise. These transactions, in so far as they involve relationships between the enterprise and outside parties, or affect more than one equity within the business, have a background of legal considerations. Thus the basic conditions of ownership, and the means of transferring property from one party to another, are primarily legal matters, and yet are questions with which the accountant is very much concerned. What are the essential factors of purchase and sale? When does title pass? These questions are the more difficult in view of the variety of circumstances under which business transactions are effected. Merchandise is sold for cash, on approval, on account, on the installment plan, and otherwise; and the specific details of ordering, shipment, delivery, and collection may vary widely. The accountant, in developing general procedures or in dealing with the specific case, must not lose sight of the legal aspects.

A working knowledge of particular statutes, regulations, and decisions is often required of the accountant. At present a considerable part of the work of the professional accountant consists of the preparation of tax returns and the handling of special tax problems, and hence some familiarity with the various tax laws, and the administrative and judicial rulings and interpretations attaching thereto, is an essential part of his equipment. In dealing with transactions involving notes, mortgages, bonds, etc., the accountant should be acquainted with the law of negotiable instruments. In the field of corporate accounting—particularly in connection with organization, reorganization, and dissolution—the accountant's grasp of the general legal background may well be fortified with knowledge of specific statutory provisions and requirements. Similar statements might be made in connection with partnership accounting and other phases of the accountant's work.

Methods of appraising fixed assets such as land, buildings, and equipment have been largely developed by engineers, and from an engineering point of view, and the actual work of valuation, for this type of property, has been done primarily by engineers. In recent years, however, with the development of the doctrine that major revaluations should be fully reflected in the accounts, it has come to be recognized that the accountant must be relied upon to assist in planning the valuation procedure, and must be given a wide latitude

in interpreting the results of the valuation process and in making the adjustments in the records, if unsound policies and questionable conclusions are to be avoided. Similarly, it is now generally realized that the establishment of a proper depreciation policy for a business enterprise is in part a matter of engineering data and in part a question of financial accounting, and hence requires a high degree of cooperation between the engineering and accounting staffs.

The relation between the accountant and the engineer is nowhere more apparent than in the field of cost accounting. In fact such activities as the handling of stores and stores records, the development of time-keeping systems and labor analyses, the determination and effective use of a mass of operating data as a basis for measuring and distributing various types of indirect or overhead costs can be labeled "cost accounting" or "industrial engineering" as one pleases.

Questions

1. What is the underlying function of accounting and what two basic activities are included?

2. What is the important economic unit with which the accountant is concerned? Define accounting from this point of view. Whose interests in the business enterprise are of first importance to the accountant?

3. What are the chief characteristics of the business enterprise? List the principal fields of business activity. Name the principal types of enterprise from a legal standpoint.

4. Describe the single-proprietorship. The partnership.

5. What are the essential features of the corporation? Indicate precisely why the corporate form of enterprise is of especial importance to the accountant.

6. State several situations outside the business field which require accounting records.

7. Precisely why might the development of income taxation on a large scale be expected to contribute to the development of accounting?

8. Indicate the relation between accounting and governmental regulation of business.

9. What are the principal branches or phases of the field of accounting? Indicate the character of each.

10. What is the relationship between economics and accounting? Why should the accountant be familiar with business law? What have the engineer and the accountant in common?

II

ASSETS AND EQUITIES

Fundamental Divisions of Data. The first step in the study of the accounting mechanism is to become acquainted with the fundamental types or groups of data found in the business enterprise that it is the task of the accountant to determine and report. The underlying divisions are: (1) the *assets*; (2) the *equities*. The statement of financial position prepared by the accountant, the "balance sheet," is essentially a systematic exhibit of the assets and equities of the enterprise. Any complete system of accounts, when reduced to its lowest terms, represents a list of asset and equity balances, technically arranged. It follows that all other classes of data, and the corresponding concepts, are subordinate to the primary categories and can be defined in terms of relationship thereto.

This two-dimensional aspect of the financial condition of the business enterprise, long recognized in practice, is undoubtedly its most striking and important feature as far as accounting procedure is concerned. The classification of data into assets and equities is the foundation of the "double-entry system" of recording.

The immediate data of accounting, it should be emphasized, are the *economic* or financial facts of the business enterprise; that is, the accountant deals primarily with values, expressed in terms of the money unit in use. The accountant's peculiar realm is thus relatively narrow and excludes a great many characteristics and features of the business enterprise and its activities. On the other hand, the accountant is at least indirectly concerned with forms of business organization, legal considerations, technological methods, and other aspects of business administration, since such factors often have an important bearing on accounting principles and procedure.

Nature of Assets. The assets represent all the properties or resources that belong to or legally attach to the business concern. An asset may be defined as *any factor, tangible or otherwise, owned by a specific business enterprise and having economic significance to that enterprise.* Under modern business conditions the term covers a very broad territory. The assets of an enterprise may consist not only of many different kinds of physical resources, such as land, buildings, machinery, merchandise, and actual money, but also of a variety of rights and claims to money or services, such as customers' balances, bank accounts, notes and bills, mortgages, stocks, bonds, leaseholds, and prepaid insurance. In addition there are such assets as franchises, patents, trade-marks, goodwill, etc., usually labeled "intangibles," which constitute a special group. But each asset, although it may be dissimilar to other items in many respects, has one characteristic in common with all other resources; viz., it must be of value to the specific enterprise to which it attaches.

Types of Physical Assets. Some amplification of the foregoing reference to physical property is desirable at this point. Exclusive of money itself, there are four principal groups of such assets: (1) inventories; (2) natural resources; (3) buildings and other structures; (4) machinery and equipment. The first group includes: all kinds of merchandise and supplies in the hands of trading concerns; the materials and supplies of manufacturers and converters; goods in process of completion, in all fields; finished products of all kinds in the hands of producers. Major subdivisions of the second group are building sites, rights-of-way, agricultural land, water rights, mineral deposits, oil and gas resources, timber, fisheries, and—possibly—such properties as orchards, groves, etc. The third group comprises all buildings used to house operations or goods, such as stores, factories, railway buildings, banking houses, grain elevators, and a wide range of fixed structures such as wharves, shafts, bridges, and towers. The fourth group is especially broad. It covers: all stationary machines and apparatus, both standard and specialized; mobile equipment such as trucks, locomotives, cars, ships, etc.; office appliances; conveying and transportation facilities such as rail lines, power lines, water mains, oil lines, etc.; furniture and furnishings; patterns, molds, plates, lasts, etc.; tools; containers such as casks, bottles, drums, etc., capable of repeated use; and, under some circumstances, animals.

Current and Fixed Assets. From the standpoint of accounting statements the most significant classification of assets yields two main groups, (1) *current* assets; (2) *fixed* assets. The current group, broadly defined, includes all forms of cash, rights (such as marketable securities, accounts receivable, and short-term notes) which will or may be converted into cash in a relatively short time, all goods on hand which will be either consumed in the process of production or sold in the near future, and claims for current goods or services for which payment has been made in advance of receipt. The non-current or "fixed" group includes the last three types of physical assets illustrated above and all long-term rights, claims, and commitments, especially if not readily marketable or if held under special conditions and restrictions. The intangibles, such as patents and franchises, also belong to the non-current group.

The current assets are the resources which may reasonably be included in the area of "working capital," as that expression is commonly understood. In practice many border-line cases arise, and classification in such cases will vary with the judgment of the accountant.

Basis of Recording Assets. A question arises immediately with respect to the basis of recording asset values. For the present a brief comment will be sufficient. Assets acquired by purchase are entered on the books of the buyer, initially, at *cost*. By cost in this connection is normally meant the entire amount expended in cash or equivalent, in placing the asset in condition to serve the particular purpose for which it was intended by the buyer. Thus the cost of a unit of machine equipment, on its foundation and ready to operate, includes transportation and installation charges. The validity of cost as representing initial value rests on the assumption that both buyer and seller have exercised reasonable business judgment in coming to an agreement, an assumption which is not unwarranted except in cases where fraud, extreme carelessness, or other unusual condition, is apparent. In the case of assets acquired by other processes than purchase—such as gift, investment, discovery, or accretion—the proper basis of initial recording is fair market value at date of acquisition.

Presentation of Assets. In preparing a schedule of the assets of an enterprise to be incorporated in the statement of financial position, or to be used for any other purpose, the various kinds of assets involved can be listed or classified in considerable detail

stated under a few heads. The extent to which subdivision of assets shall be carried is purely a matter of expediency, depending upon the character of the enterprise in question and the purposes which the report is intended to serve. Thus a small mercantile establishment may make use of but few types of property and hence require but few asset accounts; a large manufacturing corporation, on the other hand, may utilize hundreds of distinct types or groups of assets and require a correspondingly elaborate scheme of property records. Likewise, for the purposes of the immediate operating management a relatively detailed classification of properties may be needed, whereas the board of directors or the individual stockholder or owner may be adequately served by a highly summarized statement. In general a much greater degree of condensation is employed in presenting assets in the periodic report of financial condition than is feasible in the underlying records and accounts.

The M Co., for example, has assets on December 31, 1949, as follows: cash, $20,000; accounts receivable, $40,000 merchandise, $70,000; land, $50,000; building, $60,000; equipment, $30,000. The financial statement of the enterprise at this time, accordingly, must show this list of assets. The usual and most convenient method of presentation is by means of the vertical column, thus:

Assets

Cash	$ 20,000
Accounts Receivable	40,000
Merchandise	70,000
Land	50,000
Building	60,000
Equipment	30,000
	$270,000

With current assets and fixed assets subtotaled the list of assets shown above appears as follows:

Assets

Current:		
Cash	$20,000	
Accounts Receivable	40,000	
Merchandise	70,000	$130,000
Fixed:		
Land	$50,000	
Building	60,000	
Equipment	30,000	140,000
		$270,000

In the statements of banks and other financial institutions the term "resources" is often employed as a general caption in lieu of "assets"; in other fields the standard usage is that illustrated here.

Special Features of Assets. Before taking up a consideration of the second fundamental division, the equities, certain special aspects of assets should be commented upon. In the first place business "assets" and "wealth" are not coincident, in either popular or technical usage. Wealth is a somewhat broader term in that it includes residences, furniture, clothing, books, jewelry, and other consumers' goods, in the hands of the ultimate users. Further, the accountant reckons as assets rights and claims which the particular concern has against other parties, although such elements, through a process of cancellation, disappear in the measurement of the wealth of the community or nation (except in the case of intergroup rights and claims). A bond of the Detroit Edison Co., for example, owned by a resident of Michigan, is an asset to the individual holder, but it could not be included, without duplication, in a complete inventory of all the wealth or economic resources in the state of Michigan.

Second, a list of the assets of a business is, at the best, a very imperfect exhibit of its resources in the broad sense. Not all the factors affecting the financial position of an enterprise can be given definite statistical expression in dollars and cents. For example, the loyalty and efficiency of the staff may be of great importance to the business, but this factor can hardly be recognized explicity as an asset (although it has upon occasion been argued, and not without reason, that the cost of securing and training the personnel, in so far as it can be accurately ascertained, and is still potent, should be included in any complete statement of resources).

Third, ownership and control need not be complete to justify treatment as an asset. Thus mining rights, without land ownership, may constitute an asset to the party having such rights, and the contribution of a railway to the cost of an underpass, built and financed in part by a municipality, should not be excluded from the railway's assets. All that is required is an equitable interest which can be expressed in terms of money.

On the other hand not all claims and rights rate as assets. In the case of contracts with respect to which there has been no performance by either party it is usually assumed that there is no asset to be recognized. An order received from a customer, for example, does not

give rise to a valid asset until it has been filled (except to the extent that costs may have been incurred in securing the order). An ordinary short-term lease on which full payment is made from month to month as the property in question is utilized, does not, as a rule, constitute an asset of the tenant.

Finally, mere physical possession does not, in itself, make an item an asset of the possessor. A bank holds valuables in its safe-deposit boxes, but such valuables are the assets of the patrons, not of the bank. The cars stored in the garage, similarly, are not the property of the garage proprietor. Further, securities held as collateral by a broker, or resources pledged in other connections, do not become true assets to the holders or pledgees. In such cases, it is true, those in possession secure definite legal rights with respect to the property held, and in certain circumstances such rights may approach the condition of ownership.

Nature of Equities. Does a list of assets constitute a complete statement of the status of a business enterprise? A negative answer is obviously required. There is a second fundamental division of data, the *equities*; and hence any complete exhibit of financial condition must include, in addition to the showing of assets, a tabulation of the equities or rights in assets.

The equities may be defined as the *equitable assignment or distribution of the total of the assets among the parties having rights therein which are subject to statement in monetary terms.* They represent the total ownership of the assets of the enterprise in a broad economic sense, as opposed to the more narrow legal conception; they express the interests of all those who have legally recognizable and enforceable property rights in the undertaking.

Under the complex conditions of modern business organization and operation the equities, like the assets, are of many kinds or types. There are, however, two main subdivisions of this classification which are of especial importance to the accountant. On the one hand are the liabilities, the equities of those who have, in the eyes of the law, the status of creditors. On the other are the rights of ownership in the narrow sense, the equities of those who have the status, before the law, of owners or proprietors. Each of these groups is of sufficient importance to require brief discussion at this point.

Liabilities. The liabilities are the rights or claims of the creditors, expressed in dollars and cents. As a rule they represent the equities

of those who are somewhat outside the active conduct of the business. The liabilities are usually contractual and terminable; that is, they call for payment of definite amounts on definite dates. As a group the liabilities have a preferential position with respect to both earnings and capital, although not all liabilities have the same position.

For purposes of presentation the equities of the creditors fall into two main groups, short-term or *current* liabilities and *long-term* or "fixed" liabilities. The principal examples of the first group are accounts payable, notes payable (including bills, drafts, and other forms of commercial paper), payroll, and accruals of interest, rent, taxes, and similar items. In addition short-term advances by customers and related obligations, payable in goods or services rather than money, are a type of current liability. Long-term liabilities include mortgages, purchase contracts, long-term note issues, and a wide range of types of bond issues—the last being seldom if ever found in the unincorporated field.

Liabilities may also be classified into claims secured by pledging of particular assets, and the "unsecured" debts—claims dependent for satisfaction upon the general resources of the enterprise.

Arrangement of Liabilities. In compiling a list of the liabilities of a business enterprise at a particular date for inclusion in a financial statement it is standard practice to separate current from long-term items, and to exhibit current as the first group. The order of the current items is comparatively unimportant. A possible arrangement would be to tabulate all obligations in terms of due dates, beginning with the most current. Such an arrangement, however, would often require the breaking down and separation of natural groupings such as accounts payable, notes payable, etc., and hence is not generally practicable for purposes of ordinary reports. Another possibility is to give first place to liabilities specifically secured, such as notes backed by the deposit of collateral, or to so-called "preferred" claims, such as wages payable and accrued taxes. There is something to be said for marshalling the larger amounts first, followed by the minor items. As a rule any arrangement which clearly shows the various main kinds of current debt, without great detail, is not objectionable. Liabilities payable in other media than cash (for example, through delivery of product) may well be listed last.

Similarly the long-term liabilities may be presented in almost any order provided the designation is clear and the main kinds of obligations are distinguished.

Proprietorship. "Proprietorship" is a general term used to describe the interests of the owners in the narrow sense. Proprietors are those who have the large element of direct control of business operation and financial policies. As a group, further, the proprietary equities are subordinate to the liabilities with respect to security of capital and earnings; the proprietorship, in other words, represents the residual or "balancing" equity.

Because of these characteristics proprietorship is the most important financial element from the standpoint of accounting. It is an essential function of accounting *to present periodically the status of the proprietorship and to report regularly the changes which take place in this equity.*

In the single-proprietorship or partnership the proprietary interests are commonly designated by such titles as "L. S. Watson—Capital," or "L. S. Watson—Proprietor." In some instances an additional account is used to record current changes, an appropriate caption in this connection being, for example, "L. S. Watson—Current." In the corporation the equity of the stockholders constitutes the proprietary interest and is usually represented by "Capital Stock" and "Retained Earnings," or special subdivisions of these main accounts.

The distinction between the proprietors and creditors is usually clear in the single-proprietorship or partnership. In the corporation, on the other hand, and especially in the case of large companies with a complex financial structure, the line is not so readily drawn. In such companies the important elements of control, risk, and other fundamentals of ownership are often so apportioned among the various classes of investors that it is difficult to distinguish the proprietary equity on the basis of precise legal definition. For example, some legal authorities view certain types of preferred stocks as representing "inferior creditors" rather than proprietors. In a strict sense, in fact, it is the corporate entity itself, rather than the body of stockholders, which constitutes the legal proprietor or owner.

In business practice the proprietary interest is often referred to as "equity capital," in contrast to "borrowed money" or "creditor capital." This represents a narrower use of the term equity than that adopted here.

Presentation of Equities. The equities of the M Co., on December 31, 1949, are as follows: accounts payable, $20,000; notes payable, $10,000; payroll accrued, $2,000; mortgage bonds payable, $50,000; capital stock, $150,000; retained earnings, $38,000. Tabulated in a

vertical column, and without subtotals, this list of equities appears as follows:

Equities

Accounts Payable	$ 20,000
Notes Payable	10,000
Payroll Accrued	2,000
Mortgage Bonds Payable	50,000
Capital Stock	150,000
Retained Earnings	38,000
	$270,000

With liabilities and proprietorship separated and current liabilities subtotaled this statement becomes:

Equities

Liabilities:		
Current—		
Accounts Payable	$20,000	
Notes Payable	10,000	
Payroll Accrued	2,000	$32,000
Long-term—		
Mortgage Bonds Payable		50,000
		$82,000
Stockholders' Equity:		
Capital Stock	$150,000	
Retained Earnings	38,000	188,000
		$270,000

Statement of Assets and Equities. A complete statement of the status or position of an enterprise includes both assets and equities. A presentation of the two groups in parallel vertical columns is a conventional and convenient form. The following is such a statement (with no subordinate headings or subtotals) for the M Co. on December 31, 1949:

M Company

Position Statement
December 31, 1949

Assets		*Equities*	
Cash	$ 20,000	Accounts Payable	$ 20,000
Accounts Receivable	40,000	Notes Payable	10,000
Merchandise	70,000	Payroll Accrued	2,000
Land	50,000	Mortgage Bonds Payable	50,000
Building	60,000	Capital Stock	150,000
Equipment	30,000	Retained Earnings	38,000
	$270,000		$270,000

The above constitutes a simple form of position statement. As an expression of the technical framework of accounting this is the most important statement which the accountant presents. The very essence of the work of the accountant consists of the preparation, at regular intervals, of the position statement or "balance sheet." As Sprague put it, in his classic "Philosophy of Accounts," the balance sheet is the "groundwork of accountancy . . . the origin and terminus of every account." The task of the accountant, in other words, can be conceived as the periodic extension of the basic statement into a more or less elaborate system of accounts and records, and the periodic contraction of this system to statement terms.

Arranged to display the principal subdivisions the foregoing statement appears as follows:

M Company

Position Statement
December 31, 1949

Assets			*Equities*		
Current:			**Liabilities:**		
Cash	$20,000		Current—		
Accounts Receivable . .	40,000		Accounts Payable . .	$ 20,000	
Merchandise. .	70,000	$130,000	Notes Payable	10,000	
Fixed:			Payroll Accrued . .	2,000	$ 32,000
Land	$50,000				
Building . . .	60,000		Long-term—		
Equipment . .	30,000	140,000	Mortgage Bonds Payable .		50,000
					$ 82,000
			Stockholders' Equity:		
			Capital Stock .	$150,000	
			Retained Earnings	38,000	188,000
		$270,000			$270,000

The form of statement illustrated above is traditional and is widely employed, and it is especially useful here as an introduction to the explanation of the construction of accounts. It is not, however, the only possible form or the only one in use. In a broad sense, the position statement is *any complete statement of the assets and equities of a particular enterprise, at a particular date, however arranged.*

In the statement of the unincorporated concern such captions as "proprietor's equity" or "partners' equities" may be used to designate the proprietary section of the statement. Where there is more

than one proprietor in such an enterprise the division of total proprietorship between the owners should be definitely shown.

Where it is desired to emphasize the proprietary equity as the excess of assets over liabilities a three-section form of statement is sometimes constructed. Below is a simple example, based on the data of the M Co. given above.

M Company

Position Statement
December 31, 1949

Assets

Cash	$ 20,000	
Accounts Receivable	40,000	
Merchandise	70,000	
Land	50,000	
Building	60,000	
Equipment	30,000	$270,000

Liabilities

Accounts Payable	$ 20,000	
Notes Payable	10,000	
Payroll Accrued	2,000	
Mortgage Bonds Payable	50,000	82,000
		$188,000

Stockholders' Equity

Represented by:	
Capital Stock	$150,000
Retained Earnings	38,000
	$188,000

Practical Importance of Position Statement. The position statement is the basic accounting report. It is read with interest by the financial management, by actual and prospective investors, and by others concerned. If properly prepared and arranged it not only gives a bird's-eye view of the financial status of the enterprise as a whole but also affords a basis for considerable analysis. A comparison of current assets with current liabilities, for example, is of value in indicating immediate financial standing and, hence, in formulating current financial policies. This relationship is generally referred to as the "current ratio." In the above example the current ratio is $130,000 to $32,000, or approximately 4 to 1. The excess of current assets over current liabilities is the "working capital." For the M Co. the amount of working capital is $98,000 ($130,000 less $32,000).

Similarly, the relation of proprietorship to total assets is some indication of long-run financial strength and degree of solvency. In the case of the M Co. the stockholders' equity is $188,000, approximately 70% of the total resources employed as shown by the position statement. This relationship may be referred to as the "proprietary ratio."

Comparative Position Statement. While a single statement tells little about the progress of an enterprise, a series of such statements, systematically arranged, reflects the significant features of the course of events, especially if supplemented by the figures for net earnings and income distributions. It is now common for corporations to issue financial statements in comparative form covering a period of two years or more. Such statements, properly displayed and interpreted, disclose important trends and emphasize major changes in the position of the enterprise.

The following is a simple example of the condensed comparative statement:

M COMPANY

Comparative Position Statement
December 31

Assets	*1949*	*1950*	*Increase*
Cash	$ 20,000	$ 15,000	$ 5,000**
Marketable Securities		5,000	5,000
Accounts Receivable	40,000	35,000	5,000**
Merchandise	70,000	65,000	5,000**
Land	50,000	50,000	——
Building	60,000	57,000	3,000**
Equipment	30,000	32,000	2,000
	$270,000	$259,000	$11,000**
Equities			
Accounts Payable	$ 20,000	$ 19,200	$ 800**
Notes Payable	10,000	5,000	5,000**
Taxes Accrued Payable	——	3,000	3,000
Payroll Accrued	2,000	1,500	500**
Interest Accrued Payable	——	50	50
Mortgage Bonds Payable	50,000	40,000	10,000**
Capital Stock	150,000	150,000	——
Retained Earnings*	38,000	40,250	2,250
	$270,000	$259,000	$11,000**

* During 1950 cash dividends were declared and paid to the stockholders in the amount of $6,000.

** Decrease.

Examination of this statement shows that during the year 1950 current assets (the first four items) were decreased from $130,000 to $120,000 a decline of $10,000. During the same period current liabilities (the first five items under equities) have been reduced from $32,000 to $28,750, a change of $3,250. The funds representing the decrease in working capital, $6,750 ($10,000 less $3,250), plus the decrease in total fixed assets of $1,000, a total of $7,750, may be assumed to have been absorbed in retiring mortgage bonds, which have been eliminated to the extent of $10,000. The balance of funds required to retire bonds, $2,250, is accounted for by the increase in retained earnings of $2,250. In other words the earnings for the year have been used in part to pay dividends and have been in part retained in the business, but the resulting expansion of the proprietary equity is reflected in a decrease in liabilities rather than an increase in assets.

In the comparative position statement the amount of proprietary earnings for the intervening period is represented by the increase in the proprietary equity, less any new investment made during the period and plus any dividends or other withdrawals of earnings. (The term "dividends" is generally restricted to corporate distributions.) In the above example the amount earned is $8,250 ($2,250 plus $6,000). The rate of proprietary earnings is found by comparing the proprietary income of $8,250 with the average proprietary investment, $189,125, and amounts to roughly 4.4%. In this calculation the increase resulting from earnings and the decrease represented by dividends are assumed to apply uniformly throughout the year.

Relation Between Assets and Equities. The interdependence of the two basic divisions of accounting data needs emphasis. Private property, from the standpoint of its financial description, is a two-dimensioned institution. Equities are rights in assets, and hence without assets there can be no effective equities. Similarly, asset values can hardly be conceived entirely apart and distinct from equities therein. Each conception connotes the other. The assets are the *objective resources* or property, listed by kind or type; the equities represent the *subjective legal rights* or interests of the various parties involved. In considering the assets attention is being focused upon available *funds* and commitments still effective upon which funds have been

expended; in considering the equities one is emphasizing the *sources* from which the funds have been derived. One side of the position statement expresses *economic factors* required in operation, or resulting from operation; the other side displays *economic capital* or investment, as modified by events to date. The assets measure the financial position of the enterprise from one point of view; the equities describe financial position from another, but complementary, point of view. The business dollar, like the coin itself, has two sides, but these are described as assets and equities rather than as "heads" and "tails."

It follows that the totals of the two divisions, expressed in like monetary units, are always numerically equal. *Assets equal equities,* or, as it is sometimes put, *assets minus liabilities equal proprietorship.*

This situation is shown graphically on page 28. As indicated by the figure there is but one underlying fund of values. This fund, however, has two statistical descriptions, each of decided importance in the affairs of the enterprise. Each equity is here displayed as a cross section of *all* the assets, ignoring the fact that rights of particular creditors or classes of creditors may be specially protected by the pledging of specific resources. The distinction between the liabilities and the proprietary interest is emphasized by the use of a heavy dotted line.

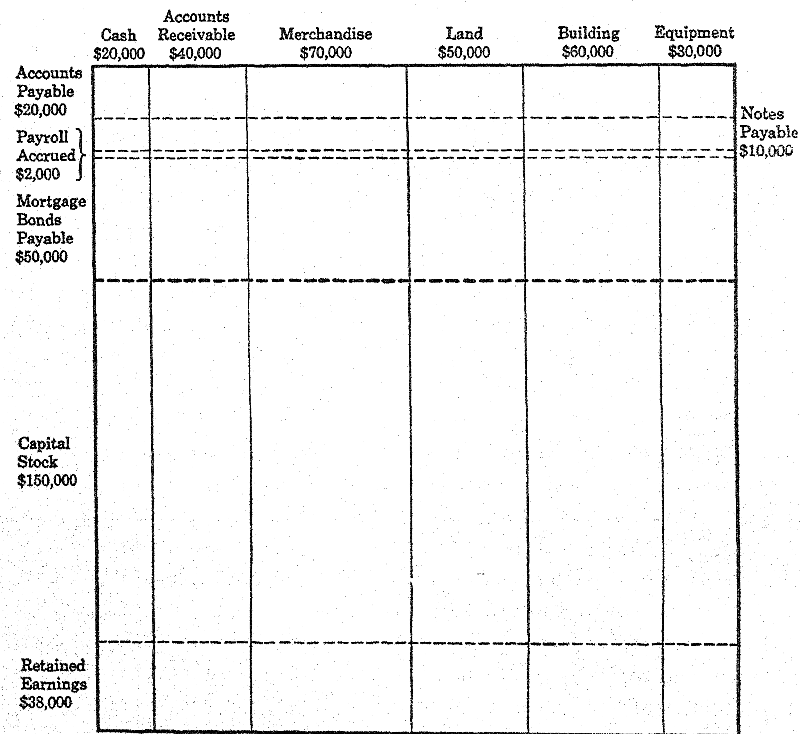
Exceptions to the Equation. While the equation of assets and equities holds for all typical business enterprises, large and small, there are certain special situations which constitute apparent exceptions. The equities of the bankrupt enterprise, as listed, may exceed the assets. This discrepancy is due to the fact that the assets in such cases are usually expressed in terms of current, realizable values while the equities are maintained at original amounts. Evidently a statement so prepared, although it may be useful in connection with the liquidation of the concern, is not a report of existing assets and effective rights therein. The amounts to be received by the claimants cannot exceed the available resources; the insolvent concern pays less than one hundred cents on the dollar.

Outside the field of the business enterprise proper are found situations where it is hardly possible to express financial status precisely in terms of an equation of assets and equities. Assets are never found

without equities, but in some cases definite liabilities are not accompanied by measurable assets. The college student, for example, may borrow money to secure an education and thus come to have liabilities exceeding his recognizable assets. He has "mortgaged his future"; that is, the "assets" securing the loan are his health, integrity, and probable earning power. Here the asset side of the statement consists of imponderables, of elements which cannot readily be expressed in dollars and cents. This illustrates a limitation of the position statement, and of accounts in general, referred to earlier.

M COMPANY

Assets and Equities
(Total recognizable values, $270,000)



The governmental unit—local, state, or Federal—may have liabilities far in excess of governmental property. It is the government's potential control of the assets and productivity of its citizens, lodged

in the power to tax, rather than the list of assets to which it has title at any given moment, which constitutes the essential element of financial strength. Governmental liabilities, accordingly, may greatly exceed the conventional governmental assets and yet be adequately secured. In all such cases the preparation of a balanced statement can be accomplished only through the inclusion of a special heading to cover the discrepancy between the liabilities and the measurable assets.

Technical Significance of Equation. The underlying equation constitutes a striking and highly important feature of the accounting system. It is a basic factor in the construction of accounts and accounting records generally, and it is exploited to the utmost in the development of methods of verification. The work of recording business transactions, stated in its lowest terms, is the process of reflecting in the members of the equation the changes resulting from the conditions of operation. The essence of every accounting operation, in other words, is its effect upon the statement of assets and equities.

Illustrative Problems. To facilitate the work of the student two illustrative problems and solutions are included at this point.

I

Data

The following is a *complete* list of the business assets and liabilites of M. R. Bowles, an automobile dealer, at the close of business on September 30, 1949:

Balance at First National Bank	$2,000
Unexpired insurance	100
Cash in office	200
Note payable at First National Bank on October 1, 1949*	1,000
Notes receivable	3,000
Used cars	4,500
Interest accrued on notes receivable	30
Taxes accrued payable	370
Shop equipment	2,500
New cars	1,600
Cole Motor Works	1,600
Parts and accessories	2,000
Shop supplies	200
Rent advance for October to J. B. Selden	200
Office equipment	300
Office supplies	100
Other accounts payable	1,000

* This is a 6% note, dated August 1, 1949

Directions

Prepare a condensed statement of assets and equities.

Solution

M. R. Bowles, Proprietor

Position Statement

September 30, 1949

Assets

Current:		
Cash on Hand and in Bank	$2,200	
Notes Receivable (including interest accrued of $30)	3,030	
New Cars	1,600	
Used Cars	4,500	
Parts, Accessories, and Supplies	2,300	
Rent and Insurance Prepaid	300	$13,930
Fixed:		
Shop Equipment	$2,500	
Office Equipment	300	2,800
		$16,730

Equities

Liabilities:		
Accounts Payable	$2,600	
Note Payable (including accrued interest, $10)	1,010	
Taxes Accrued Payable	370	$ 3,980
Capital:		
M. R. Bowles, Proprietor		12,750
		$16,730

Comments

(1) The statement might be set up in somewhat greater detail on the basis of the data given by separating the two cash items, separating rent and insurance balances, and showing the items of interest and supplies under distinct headings. Greater condensation is also possible, particularly by combining all classes of merchandise and supplies.

(2) It would be possible—and entirely proper—to show in the statement the names of the various parties mentioned: First National Bank, Cole Motor Works, and J. B. Selden. On the other hand, no names are given in the case of unexpired insurance, notes receivable, taxes accrued, and accounts payable.

(3) The specified interest rate is generally the annual rate. Interest accrued payable is computed on the assumption that the period is one-sixth of a year and that the entire amount of interest, payable with the face of the note the following day, is now accrued. Where the annual rate is 6% interest is often calculated for

illustrative purposes at ½% per month, all months being assumed to be of equal length.

(4) From the data available it is not possible to separate the equity of the proprietor into original capital and invested earnings. Particularly in the unincorporated enterprise the term "capital" is often applied to the entire proprietary equity.

II

Data

On December 31, 1949, the assets and equities of the Glen Court Apartments Co. are as follows: cash in office, $500; cash on deposit, First National Bank, $5,000; rents receivable, $5,500; rents prepaid by tenants, $600; investments, in safe deposit box, $4,000; interest accrued on the Company's bonds outstanding, $4,500; first mortgage bonds outstanding, $150,000; furniture and furnishings, $20,000; building, net depreciated value, $155,000; land, $40,000; accounts payable, $3,000; office equipment, net depreciated value, $500; wages and salaries accrued payable, $500; operating equipment, net depreciated value, $1,000; unexpired insurance, $1,000; fuel, $400; miscellaneous supplies, $200; capital stock, $75,000; deficit (accumulated loss), $500.

On January 1, 1950, a half-year's bond interest, $4,500, is paid and on July 1, 1950, the next interest-payment date, the same amount is paid. On December 31, 1950, the amounts of cash in office, investments, land, unexpired insurance, bonds outstanding, and capital stock are the same as on December 31, 1949. Rents receivable on December 31, 1950, stand at $6,000, and rent advances at this date amount to $500. Other final balances on December 31, 1950, are as follows: First National Bank, $5,200; fuel, $300; miscellaneous supplies, $100; building, $152,000; furniture and furnishings, $23,000; office equipment, $475; operating equipment, $950; wages and salaries payable, $200; accounts payable, $1,000. The amount of retained earnings (or deficit) as of December 31, 1950, can be determined from the foregoing data.

Directions

Set up a comparative position statement for the Glen Court Apartments Co. for the dates December 31, 1949, and December 31, 1950. Also answer the following questions, indicating how you arrive at the conclusion in each case:

(a) What is the amount of earnings (or loss) for the year ending December 31, 1950, assuming that no payments to stockholders were made during this period?

(b) What is the financial effect of the earnings (or loss) for 1950 as revealed by the comparative statement?

(c) What is the proprietary equity ratio at December 31, 1950?

(d) What is the amount of working capital at December 31, 1950?

(e) What is the rate of proprietary earnings for the year 1950 to the proprietary equity?

(f) Would it be feasible to distribute the earnings (if any) by a cash dividend?

Solution

GLEN COURT APARTMENTS COMPANY
Comparative Position Statement

Assets	*12/31/49*	*12/31/50*	*Increase*
Cash in Office	$ 500	$ 500	$ —
First National Bank	5,000	5,200	200
Rents Receivable	5,500	6,000	500
Fuel and Miscellaneous Supplies	600	400	200*
Unexpired Insurance	1,000	1,000	—
Investments	4,000	4,000	—
Land	40,000	40,000	—
Building	155,000	152,000	3,000*
Furniture and Furnishings	20,000	23,000	3,000
Office and Operating Equipment	1,500	1,425	75*
	$233,100	$233,525	$ 425

Equities			
Interest Accrued Payable	$ 4,500	$ 4,500	$ —
Wages and Salaries Payable	500	200	300*
Accounts Payable	3,000	1,000	2,000*
Rent Advances	600	500	100*
Mortgage Bonds Outstanding	150,000	150,000	—
Capital Stock	75,000	75,000	—
Retained Earnings	500*	2,325	2,825
	$233,100	$233,525	$ 425

* Negative or decrease

(a) The amount of the increase in retained earning (taking into account deficit at beginning of year) or $2,825.

(b) With respect to fixed assets there is a decrease of $75. There is no change in long-term liabilities. The financial effect of the earnings is therefore found primarily in the current assets and current liabilities, as shown by the following:

Increase in current assets	$ 500
Decrease in current liabilities	2,400
	$2,900
Decrease in fixed assets	75
Earnings for period	$2,825

(c) The proprietary equity ratio on December 31, 1950, is 77,325/233,525, or approximately 33%.

(d) If the investments are treated as a current asset the total on December 31, 1950, is $17,100, and the excess of current assets over current liabilities ($6,200) is $10,900. If investments are excluded from current assets the amount of net working capital is reduced to $6,900.

(e) The proprietary equity at the beginning of 1950 is $74,500; at the end of the year it stands at $77,325; the average (assuming profits have been earned uniformly throughout the year) is $75,912.50. The rate earned therefore is 2,825/75,912.50, or approximately 3.7%.

(f) Since nearly all the cash is needed to meet interest due on January 1, 1951, a substantial cash dividend cannot reasonably be declared and paid at this time unless the investments are liquidated. The fact that the Company has apparently not been doing well in earlier periods also suggests the desirability of postponing dividends for the time being.

Questions

1. What is meant by the statement that the financial condition of an enterprise is "two-dimensioned"?
2. "Accounting deals only with those business data which can be expressed in monetary or value terms." Explain.
3. Define *asset*. Give several examples of "rights" as assets. Illustrate each of the main types of physical assets.
4. Distinguish, with illustrations, between *current* and *fixed* assets.
5. How is the initial value of an asset measured for purposes of accounting?
6. Contrast *assets* and *wealth*. Give illustrations of business "resources," in the broad sense, which cannot readily be presented as assets.
7. Illustrate possession without ownership.
8. Is an order received by a manufacturer an asset? Explain.
9. Is a building under lease, and completely occupied and controlled by a lessee, an asset of such lessee? Under what circumstances would a leasehold constitute an asset of the tenant?
10. Define *equity*.
11. What is a *liability?* Give several examples.
12. Define *proprietorship*, and contrast position of proprietors and creditors.
13. In a strict sense who is the proprietor or owner in the case of the corporation?
14. Indicate definitely the practical importance of the position statement. Define *current ratio. Proprietary equity ratio. Working capital.*
15. Support the proposition that the assets and equities, although interdependent and complementary elements, are entirely distinct classes of accounting data.
16. In what situations are found apparent exceptions to the equation of assets and equities?

III

ASSET AND EQUITY ACCOUNTS

Effects of Operation—Assets. A particular status of the assets of the typical enterprise is only momentarily maintained. Business operation and the passage of time inevitably bring changes. The process of production requires the utilization of a more or less continuous stream of plant assets, materials and supplies, and services of various kinds. Ebb and flow of cash, receivables, and related assets is also characteristic of business activity. A particular item loses its identity and disappears; a new unit takes its place. The funds of the enterprise, in the sense of total economic capital involved, may be maintained or may even be increased, but the specific assets in which this capital inheres will not remain unchanged, as a rule, for any long period.

Looking at the productive process in the technical sense one finds three main types of transactions or activities which affect the assets of an enterprise in the normal course of business operation. First, materials and other factors are acquired to be used in production. Factory supplies, for example, are purchased with cash. Second, particular assets are utilized and are converted into new forms. Thus raw materials, supplies, labor services, etc. are transformed (in the economic if not in the physical sense) into work in process (semi-finished goods) and, finally, finished product. This process is particularly important in the fields of construction and manufacturing, and the fabrication of an airplane is a familiar example. Third, the values of particular cost factors finally leave the enterprise and become cost of sales, or expense, as the product in which they are embodied or to which they economically attach is sold, and new assets (proceeds in cash or equivalent) appear. Assuming operation

to be successful the assets resulting from sales will exceed all expirations or costs involved by the amount of the income margin; and if operation is unsuccessful the flow of values from the business will exceed the new values secured, the difference being the amount of loss.

Aside from technical operation, the assets of a business may be affected by borrowing and additional proprietary investment, by repayment of loans and proprietary withdrawals, by distributions of earnings, by special gains and losses, and, in unusual circumstances, by bequests or other forms of gifts and donations. The assets are also affected by price changes, and by the processes of accretion, exhaustion, and so on.

Effects of Operation—Equities. Changes in equities—in part corresponding to or resulting from changes in assets—likewise result from business operation and activity. Equities arise through borrowing or through the acquisition of assets on a credit basis, and are later retired by payment in cash or an equivalent. This process of alternate increase and decrease is particularly common in the case of short-term liabilities incurred when goods and services are purchased on account. Further, one equity may be directly exchanged for or converted into another, with or without any accompanying change in assets. Examples are the giving of a promissory note to cover an open book account, the conversion of the bonds of a corporation into its stock, and the capitalization of corporate earnings as a stock "dividend." A third type of change in equities, involving the proprietary interest in particular, is represented by the favorable or unfavorable result of operation; the equity of the owners is increased by gains or profits and diminished by losses. There may be mentioned, finally, the effect upon equities of additional proprietary investment, of withdrawals of either income or principal, and of special contributions.

Direct Statement Accounting. The use of the position statement itself as an all-inclusive account would be the most direct method of accounting for the changes in assets and equities flowing from business operation. That is, by altering particular asset and equity elements in the proper direction and amount, and by introducing the necessary additional headings when new properties were acquired or when new equities appeared, the entire process of recording changes

in financial condition might conceivably be reduced to the preparation and presentation of a continuous "balance-sheet" statement. For example, if the M Co. (referring to illustrative statement in Chapter II) purchased merchandise for cash to the amount of $500 the transaction might be recorded by erasing or crossing out the original figures for both merchandise and cash, and substituting the corrected amounts, $70,500 and $19,500, respectively. Similarly, if the M Co. paid in cash the amount of payroll accrued, $2,000, the reduction of the cash balance by $2,000 and the elimination of the payroll item would immediately reflect in the statement the changes resulting from this transaction.

Such a scheme of accounting—assuming that it could be applied to all transactions and processes affecting the assets and equities of the enterprise—would make available to the owners a revised statement of financial position at the conclusion of each transaction.

Need for System of Accounts. As a practical matter accounting for the affairs of the typical enterprise by means of direct adjustments in statement figures would be inconvenient and unsatisfactory, if not quite impossible. Serious objections to any such plan of procedure at once present themselves. First, a system of continuous statement accounting would be very inadequate in that it would throw little light upon the business process; it would show the results of operation but it would not emphasize the process. Second, some types of business transactions are of such a character that it is scarcely possible to resolve them immediately into their underlying asset and equity elements. The sale transaction is the outstanding example. As will be explained in a later chapter it is necessary to accumulate revenue figures in a supplementary, temporary classification which is reduced to its lowest terms, through the assembling of expired costs and other deductions, at the close of each accounting period. In the third place, certain processes of change in assets are of such a character that it would be inexpedient to attempt to register their day-to-day effects in the balance sheet. Depreciation of buildings and equipment is a major example.

In addition there are important clerical considerations which make necessary the extension of the position statement into a system of accounts. In the first place, recording the effects of business transactions by direct alteration of statement items, even if possible, would be a very slow and inconvenient method of procedure. Evi-

dently more space than is afforded by the underlying statement (as ordinarily constructed) must be made available. And this is only a beginning. The essential attributes of good bookkeeping—accuracy, speed, neatness, etc.—can be secured only through extensive subdivision and elaboration of the structure of the position statement, and the use of numerous supplementary technical devices. Further, a specialized system is required to make possible the employment of a staff large enough to accomplish the task of accounting for the many transactions arising in the large enterprise. Several persons evidently, cannot work to advantage, simultaneously, upon a single account, statement, or book. A reasonable degree of specialization and systematic procedure is also an essential element in the establishment of adequate means of controlling personal responsibilities. That is, a system of "internal check" is necessary to prevent inefficiency and dishonesty on the part of employees. These considerations, it should be noted, reach much beyond the immediate question, the need for a system of accounts based upon the underlying equation.

Quantitative Effects of Operation. Granting that a system of accounts is necessary, what shall be the structure of the individual account? The first step in answering this question is a consideration of the quantitative effects of business transactions on the fundamental classes of data.

Economic values expressed in monetary units, as stated earlier, are the immediate material of accounting. Such values, like all other quantities or magnitudes, are subject to two—and only two—types of changes, increase and decrease. It follows that business operation, from the standpoint of underlying quantitative effects, simmers down to a process of addition and subtraction in terms of assets and equities. Assets are purchased, constructed, fabricated, improved, or otherwise acquired or enhanced—in each case the effect is an increase; assets are sold, consumed, depreciated, abandoned, or otherwise disposed of or reduced in value—in each case the result is a decrease. In the case of equities (liability and proprietary interests) the quantitative effect of investment, borrowing, and profitable operation is in each case an addition; on the other hand capital payments and other proprietary withdrawals, payment of liabilities, distributions of income, and losses represent subtractions from equity balances.

The underlying effects of business operation, to summarize, are as follows:

1. Increases in assets
2. Decreases in assets
3. Increases in equities
4. Decreases in equities

In constructing the accounts, provision must be made for recording these changes in an efficient manner.

Separation of Increases and Decreases. The first step in the construction of the system of individual accounts may be conceived as the stretching out or extension of the balanced position statement so that space will be available under each heading in which to record the changes which may occur in connection with the particular asset or equity item. The second step consists of the development of some device for dealing with the opposing tendencies, increases and decreases. That is, some method of designating pluses and minuses, of distinguishing between positive and negative effects, is required.

There are various means by which this might be accomplished. The conventional plus and minus signs, or black and red inks, could be used to label increases and decreases, respectively; and it would not be difficult to evolve other symbolical devices. It is to be doubted, however, if any such method of designation is as satisfactory as a complete separation secured through the division of the space allotted to each account into two main sections or compartments. In the first place, by accumulating positive and negative elements in separate sections for a period the immediate arithmetical work is reduced to a minimum and the process of sorting at a later date is avoided. Under this plan the routine clerical work of recording business transactions in the accounts is largely confined to copying, supplemented by the striking of periodic balances, and both speed and accuracy are fostered. Further, the separation and accumulation (for a period) of the positive and negative entries applicable to a particular heading results in a more complete and satisfactory accounting record. Increases and decreases may each constitute data of intrinsic importance for managerial purposes. The cash account, for example, must be so constructed that both receipts (increases) and disbursements (decreases) for a given period are clearly presented. A cash record which exhibited nothing more than a continuous net balance would not be a satisfactory account.

Each asset and equity account, accordingly, should be divided into

two main parts or sections, in one of which should be recorded all additions and in the other all deductions.

Vertical-Column Account Form. The framework of the conventional "balance sheet," as has been shown, consists of two parallel vertical columns. As it happens this device exactly meets the requirements of the individual asset or equity account as just explained. Thus the fundamental statement becomes also the master account as to form.

The account may now be defined, as to skeleton form, as *an individual title followed by two parallel vertical columns* of suitable width and height, and in which are recorded the increases and decreases, with respect to the element represented by the account, which are brought about through a particular period of time. Each account may be conceived as a replica, in form, of the underlying financial statement. The statement itself constitutes the basic account. To record the facts of business operation the accountant finds it necessary to extend this parent account into a more or less extensive system of subsidiary units, each of which takes the form of the initial summary. The reverse operation, the concentration of all data appearing in the individual accounts and their return to the master account, must also be periodically undertaken. The entire process of accounting may therefore be resolved into a succession of alternate operations: (1) the extension of the position statement into a system of accounts; (2) the contraction of this system to statement status.

While other account forms are possible, and are to some extent in actual use, it would be difficult to discover a device more generally satisfactory than the vertical-column scheme. It meets the fundamental requirements of the account as outlined above. It is also extremely convenient from the clerical standpoint, as it makes possible writing particular numbers in horizontal lines and taking totals by adding vertical columns of figures. Comparison with other methods will readily disclose the fact that this is, intrinsically, a highly advantageous mode of procedure.

Arrangement of Account Columns. Which column shall be used for increases and which for decreases? Shall one column be used throughout for increases and the other for decreases or shall the arrangement vary with the type of account involved? The answer to these questions is purely a matter of expediency. What is required

is some systematic plan of arrangement, not unduly intricate, which can be readily followed by the bookkeeper and accountant. Again the form of the basic statement may be referred to as a guide. In the statement of assets and equities presented on page 22 the assets were listed in the left column and the equities were exhibited in the right. To be consistent with the arrangement in the master account, accordingly, it is necessary to have *left* stand for asset balances and *right* for equity balances throughout the entire system. This means that in the case of the asset accounts it will be necessary to use the left-hand column for increases and the right-hand column for decreases; for only in this way can positive asset balances be preserved at the left. And in the case of the individual equity accounts, similarly, it will be necessary to use the right-hand column for increases and the left-hand column for decreases in order to preserve positive equity balances at the right.

In these arrangements lies the essential basis of the double-entry system of bookkeeping, and mastery of this scheme is therefore an important step in acquiring an understanding of accounting procedure. The left-hand column of the accounts contains two distinct types of data, as follows:

1. Increases in assets
2. Decreases in equities

Similarly, the right-hand column includes two kinds of facts:

1. Decreases in assets
2. Increases in equities

Scheme of Accounts Illustrated. The essence of the accounting structure may be emphasized diagrammatically. If the statement of the M Co. given previously is extended into a system of skeleton accounts in accordance with the scheme which has just been explained, the entire system, shown in relation to the statement and the fundamental classes of data involved, may be represented by the first tabulation on page 41.

It must be borne in mind that this is an artificial example, designed to emphasize very general considerations. Moreover, it must not be assumed that such a chart would be used in business practice. The illustration is presented solely for the purpose of displaying underlying relationships. The accounts of an actual business enterprise are commonly found in a bound or loose-leaf volume, or in a card file, in which one or more pages or sheets are reserved for each

M Company

Scheme of Skeleton Accounts

Assets		*Equities*	
Increases	Decreases	Decreases	Increases
CASH		**ACCOUNTS PAYABLE**	
$20,000			$ 20,000
ACCOUNTS RECEIVABLE		**NOTES PAYABLE**	
$40,000			$ 10,000
MERCHANDISE		**PAYROLL ACCRUED**	
$70,000			$ 2,000
LAND		**MORTGAGE BONDS PAYABLE**	
$50,000			$ 50,000
BUILDING		**CAPITAL STOCK**	
$60,000			$150,000
EQUIPMENT		**RETAINED EARNINGS**	
$30,000			$ 38,000
$270,000	Totals		$270,000

CASH

1949					1949				
Dec. 1	Balance	√	$18,000		Dec.	1–31	Disbursements		$30,000
1–31	Receipts		32,000			31	Balance	√	20,000
			$50,000						$50,000
1950									
Jan. 1	Balance	√	$20,000						

account, and the arrangement followed is not always in terms of fundamental classes. An account page in practice is a relatively complex structure, with columns for dates, explanations, and folio numbers, as well as money columns appropriately subdivided. The skeleton "T" accounts as shown here are useful only for illustrative purposes and in working out problems in which details are not being emphasized. Nevertheless the typical account as found in practice, whatever its detail characteristics, consists fundamentally of two main divisions or columns, one for increases and the other for decreases.

Individual Accounts—Definition and Content. A more complete definition and explanation of the account is required at this point. In a broad sense any systematic record of the facts arising in connection with a distinct financial element is an account, regardless of the particular form employed. Thus a check book with the stubs filled in to show deposits and drawings is a type of cash account, and a file of invoices and credit memoranda may serve as an informal account of transactions with a particular customer. In a more narrow technical sense *an account is a complete presentation of the positive and negative items arising in connection with an asset or equity (or some significant phase thereof) for a particular period, and including opening and concluding balances (if any), the opposing data being segregated in parallel vertical columns or sections.* The increases and decreases for the period may be shown in detail or in more or less summarized form, depending upon the purposes involved and the particular procedure employed.

To illustrate the nature of the individual account it will be assumed that the cash account of the M Co. for the month of December, 1949, in skeleton form, appears as shown by the tabulation at the bottom of page 41.

In this example the difference between the positive items amounting to $50,000 and the negative total of $30,000, a balance of $20,000 as of January 1, 1950, is shown first as a balancing figure on the right-hand side, in accordance with the traditional method of finding a balance by adding a sufficient amount to the lesser side to bring about an equality of footings.

The character and number of accounts employed should vary with the nature of the enterprise and the needs of the management, and care must be exercised in the selection of titles and in determining

the extent of the system. With respect to content the accounts in almost any scheme or classification will range from those which are very broad in scope to those which are highly specialized. An account covering all classes of merchandise handled by a large retail establishment is evidently a very comprehensive record, whereas an account representing a single kind of merchandise (a specific brand of canned peas, for example) is at the opposite extreme. In this connection attention should be called to the fact that asset and equity accounts as they appear in the typical statement often require considerable subdivision in the scheme of accounts. For example, the cash item of $20,000 in the M Co.'s statement may be represented by a bank account with a balance of $15,000 and an ordinary cash account showing currency and checks on hand amounting to $5,000; and of necessity the Company's "accounts receivable" of $40,000 must be supported by the accounts of the individual customers.

Current Costs. In addition to the principal classes of materials and merchandise the typical business enterprise utilizes various types of current commodities such as fuel, repair parts, shipping supplies, and office supplies. The operation of the enterprise also requires a more or less continuous stream of services from factory or store workers, salesmen, office staff, and other groups of employees, and collateral services such as insurance, advertising, and transportation, usually furnished by outside agencies. The costs of these transitory commodities and services are not prominently represented—in their original form—among the assets displayed in the periodic statement. The scheme of accounts must nevertheless provide for the orderly recording of such costs, and from the standpoint of number of accounts required and amount of work involved this phase of the system looms large in the activity of the accountant.

The point to be emphasized here is that all economic goods and services employed in the enterprise, however fleeting in character, either constitute in themselves business assets or give up their values to other assets. *A current factor in production for which funds have been expended is no less an element in immediate asset values than is a long-term factor.* In the case of fuel, stationery, and other tangible items the soundness of this statement is quite apparent. In the case of ordinary labor, management, and other types of services the proposition is perhaps less evident but is equally valid. Costs of services contribute to the sum total of the assets of a business just as

surely as do the costs of material objects. In fact, the value of a physical asset such as a unit of equipment or a building, viewed from the standpoint of cost, is largely a summation of the costs of the various services required to produce the asset and place it in a condition ready to function.

Accounts with Current Supplies. Accounts in which may be recorded the costs of current supplies of various kinds can be readily incorporated into the scheme of asset and equity accounts thus far outlined. In the case of all such accounts the costs as incurred—increases—are recorded in the left-hand column, and as the goods are consumed or are assigned to other classifications the amounts involved—decreases—are entered in the right-hand column. Assume, for example, that in the case of a particular concern the amount of store supplies on hand December 1 is $500, that supplies purchased and received in December total $1,000, and that the amount requisitioned for use during the month is $1,100. With these data recorded the account with store supplies, in summarized skeleton form, would stand as follows:

STORE SUPPLIES

1949					1949				
Dec.	1	Balance	√	$ 500	Dec.	1–31	Requisitions		$1,100
	1–31	Purchases		1,000		31	Balance	√	400
				$1,500					$1,500
1950									
Jan.	1	Balance	√	$ 400					

The amount of asset values represented by accounts of this type at any one time is likely to be relatively small as compared with the balances appearing in accounts with fixed assets such as land and buildings, or in the accounts representing the principal classes of materials and merchandise. As a rule it is not necessary to carry large reserve stocks of supplies, and utilization of such assets usually follows closely upon the heels of acquisition. These considerations, however, do not justify the treatment of current cost elements of an ancillary character as expense or loss, as is sometimes done in practice. All of the numerous kinds of supplies necessary to business operation are an addition to asset values, as received; and to insure clear thinking and sound procedure in connection with such costs it is highly desirable at this stage that the accounts in which they are recorded be construed as *asset accounts,* constructed in the same man-

ner and dealt with according to precisely the same general rules as the accounts representing the major asset values.

Accounts with Current Services. Services, evidently, have no independent *physical* existence. It is not possible, in other words, to "stock" services; they are utilized or consumed in the very act of acquisition. Hence the interpretation of an account which shows, for example, the cost of factory labor services received during a particular period as an asset account may not appear to be justified. As already pointed out, on the other hand, necessary service costs have precisely the same significance with respect to the sum of asset values as do necessary commodity costs; a dollar expended for labor contributes to production just as effectively as does a dollar expended for materials. On this basis, accordingly, it can be urged that accounts representing service costs should be construed as asset accounts.

Fortunately there is available a resonable and accurate view of the case which meets the difficulty. Accounts representing periodic costs of labor and other services can scarcely be said to represent, in themselves, specific assets; they do, however, exhibit temporary phases or stages of the *total assets* of the enterprise, and are assignable from time to time to those accounts which display the results of the work performed. Thus an account with factory labor is a record of a type of cost incurred in manufacturing operations, a cost which is immediately transferable to the work-in-process accounts and, later, to the finished stock records (assuming a situation where it is appropriate to recognize both of these classifications). Entries in such an account should be made in precisely the same manner as in a typical asset account. That is, the value of all labor services received (the total of labor cost incurred) in a particular period is recorded in the left-hand column of the labor cost account; the value of all labor services utilized during the period (which is, of course, the total amount received) is recorded in the right-hand column (although it may not be expedient to attempt to recognize such utilization continuously). Evidently an account of this type, if properly handled, will never show a balance at the close of any accounting period, and in this respect it differs sharply from the typical asset record.

For a definite illustration assume that in a particular case the cost of factory labor incurred in the month of December as shown by the time records is $20,000, and that this entire amount is assignable to

the work-in-process accounts. In this situation the factory labor account, after the record for the month has been completed, would stand as follows:

FACTORY LABOR COST

1949			1949		
Dec. 1–31	From time records	$20,000	Dec. 1–31	To work in process	$20,000

The fundamental consideration to be borne in mind here is that the cost of labor and other services should not be viewed, at the outset, as either expense or loss. Service costs incurred in a business enterprise should be handled, like other costs, on their merits. It is true that those services which are immediately and completely utilized in the process of making current sales of product have so ephemeral an effect upon operation that the costs thereof may, not unreasonably, be excluded entirely from the sphere of the asset accounts. It is equally clear that the effective service costs involved in creating a product which will not be disposed of until a later accounting period must be retained in their entirety in the asset division. And in some instances service costs incurred must be assigned to fixed-asset accounts. For example, the transportation charges incurred in connection with the purchase of a unit of factory equipment, and the cost of labor and other services required in installing such unit, are without question a part of the cost of the equipment itself, in position and ready to function.

Prepayments. While it is impossible to "stock" services, the right to services in the future is not infrequently obtained by means of a deposit or advance payment. Insurance services are almost universally prepaid, through the deposit by the insured of a premium covering a more or less considerable period, and prepayments often arise in connection with advertising contracts, leases, transportation services, etc. Advances to regular employees, while not common in most lines, occur under special circumstances. In connection with the acquisition of both current and fixed assets, likewise, deposits in advance of delivery are not uncommon, in some instances the payment being made for a considerable period prior to acquisition. The essential characteristic of all transactions involving prepayments, whether for services or goods, is the reversal of the usual credit relationship—instead of receiving credit the customer extends credit to the vendor.

All prepayments give rise to a special type of asset on the books of the party making payment and should be accounted for as such. The asset in such cases consists of the claim against the payee for services or goods to be rendered or furnished as agreed, and is valid to the degree that the responsibility of the debtor is assured. The amount prepaid is entered in the left-hand column of the appropriate asset account and from time to time, as the services or goods provided for are received, the extent to which the claim is satisfied is recorded on the other side of the account. Assume, for example, that in the case of a particular concern the amount of casualty insurance prepaid on December 1 is $1,500, that premiums paid during the month total $100, and that the amount of insurance applicable to December operation is calculated at $150. The insurance account for December would then appear, in skeleton form, as follows:

INSURANCE PREMIUMS PREPAID
(Atlas Insurance Company)

1949					1949				
Dec.	1	Balance	√	$1,500	Dec.	1–31	Amount expired		$ 150
	1–31	Premiums paid		100		31	Balance	√	1,450
				$1,600					$1,600
1950									
Jan.	1	Balance	√	$1,450					

The use in this example of the name of a particular insurance company as a part of the account title assumes that the entire amount of casualty insurance is carried with one concern. Where more than one company is involved the insurance asset account must either be appropriately subdivided or handled as one account supported by a schedule showing the status of premiums paid to each insurer. In accounting for all types of prepayments, it may be added, care must be taken to preserve a distinct record of the relationship with each party involved.

Accounts with Current Liabilities. Business operation in the typical case gives rise to many short-term liabilities. The individual liability is often small in amount, but the total of such items may be of considerable significance as a financial element. The "accounts payable"—the amounts due the various parties from whom the business is buying materials, merchandise, supplies, utility services, etc. on open account—constitute the most important group, in general,

of current liabilities. The "accrued liabilities"—the amounts accrued as of a given date on contracts involving salaries, interest, rent, royalties, etc.—represent a second important class; and such liabilities must be completely recognized, at least at the end of each accounting period, if service costs are to be correctly stated and financial position properly presented. Nowadays accrued taxes payable are often a major current liability. All payroll liabilities are commonly treated as accrued obligations rather than as accounts payable. A third type of current liability arises where amounts are received from customers or others in connection with contracts which call for future delivery or furnishing of specified goods or services. Such liabilities are matched by assets in the form of prepayments on the books of the parties making the advances.

All current liability accounts, however temporary or specialized, are dealt with in accordance with the general rules governing the equity accounts. The liability balances as of a given date appear on the right-hand side of the respective accounts. Through the following period all additional obligations incurred are recorded in the right-hand column, and all reductions through payment in cash or settlement by other means are entered in the left-hand column.

For an example of the content and treatment of a current liability account reference may be had to the payroll accrued of the M Co. shown on page 41 with a balance of $2,000 on December 31. Assuming that the accrued liability on December 1 amounted to $2,500, that the costs of services received from employees during December totaled $20,000, and that payments to employees during the month were $20,500, the payroll account for December, in skeleton form, would stand as follows:

PAYROLL ACCRUED

1949				1949			
Dec. 1–31	Payments		$20,500	Dec. 1	Balance	√	$ 2,500
31	Balance	√	2,000	1–31	From time records		20,000
			$22,500				$22,500
				1950			
				Jan. 1	Balance	√	$ 2,000

Such an account must be supported by subordinate accounts or records which show the status of each employee. In the case of all liability accounts, indeed, it is essential that the procedure adopted provide for a clear-cut record with each creditor.

Use of Skeleton Accounts Illustrated. An example in which a number of transactions are involved will serve to emphasize the way in which statement data may be recorded in a scheme of skeleton accounts.

The Muir Co. begins activity as a financial entity on July 1, 1949. The following transactions occur on that day prior to the beginning of regular operation. (1) Various persons become stockholders by investing $25,000 in cash. (2) A building is leased from J. O. Bliss at a cost of $200 per month, and rent for three months is paid in advance. (3) Factory equipment is purchased on account from the Shay-Western Co., $5,000; transportation and installation charges, paid in cash, amount to $500. (4) Materials are purchased on account from the Detroit Steel Co., $7,500. (5) A motor truck is acquired from the Huron Auto Co. at a cost of $1,500; the Company gives the vendor its note for six months at 6%, $1,000, and pays the balance in cash. (6) The account of the Detroit Steel Co. is paid in full. (7) Office equipment is purchased for cash, $500. (8) Supplies are purchased for cash, $300. (9) Insurance premiums are paid in cash to Ajax Co., $200. Organized into skeleton accounts these transactions result as follows:

CASH

(1)	$25,000	(2)	$ 600
		(3)	500
		(5)	500
		(6)	7,500
		(7)	500
		(8)	300
		(9)	200
		√	14,900
	$25,000		$25,000
√	$14,900		

MATERIALS

(4)	$7,500		

DETROIT STEEL CO.

(6)	$7,500	(4)	$7,500

MOTOR EQUIPMENT

(5)	$1,500		

CAPITAL STOCK

		(1)	$25,000

NOTES PAYABLE

		(5)	$1,000

RENT PREPAID (J. O. BLISS)

(2)	$ 600		

OFFICE EQUIPMENT

(7)	$ 500		

FACTORY EQUIPMENT

(3)	$ 5,500		

SUPPLIES

(8)	$ 300		

SHAY-WESTERN CO.

		(3)	$ 5,000

INSURANCE PREPAID (Ajax Co.)

(9)	$ 200		

The balancing figures for cash are indicated by the use of check marks (√); other entries are identified by the numbers used in listing the data above. The accounts are listed in the order of use. The position statement of the Company at this point is as follows:

MUIR COMPANY

Position Statement

July 1, 1949

Assets

Current:		
Cash	$14,900	
Materials	7,500	
Supplies	300	
Rent Prepaid	600	
Insurance Prepaid	200	$23,500
Fixed:		
Factory Equipment	$ 5,500	
Motor Equipment	1,500	
Office Equipment	500	7,500
		$31,000

Equities

Liabilities:		
Shay-Western Co.	$ 5,000	
Notes Payable	1,000	$ 6,000
Stockholders' Equity:		
Capital Stock		25,000
		$31,000

Questions

1. State and illustrate the principal classes of transactions and activities by which the assets of an enterprise are regularly affected. Do the same for the equities. Compare the two lists and note the extent of overlapping.

2. Give three underlying reasons for the development of a system of accounts, as opposed to the use of the position statement as the sole accounting device. Discuss the need for a more or less elaborate system from the standpoint of clerical expediency.

3. Why does the position statement require two main compartments or divisions? Why are two sections required in the construction of the individual account?

4. What is meant by the statement that "the balance sheet is the master or parent account"? What are the special advantages of the vertical-column form of account?

5. "The entire process of accounting can be conceived as the alternate expansion and contraction of the statement of assets and equities." Explain.

6. How are the positive and negative columns of asset and equity accounts arranged? What is the justification, if any, for the particular scheme employed?

7. Define the account. Prepare a skeleton cash account based upon your own experience.

8. "A cash record which exhibits nothing more than a continuous net balance is not a satisfactory account." Explain.

9. What is meant by "current costs"? What is the relationship of such costs, as incurred, to the assets?

10. Precisely what is the objection to the view that accounts with current supplies and services represent expenses or losses?

11. What treatment should be accorded to the freight and delivery charges and the wages of mechanics incurred in connection with the purchase and installation of a unit of equipment?

12. "Prepayments arise in transactions which involve the reversal of the usual credit relationship." Explain and illustrate.

13. What is meant by "accrued liabilities"?

IV

ANALYZING AND RECORDING TRANSACTIONS

Fundamental Groups of Transactions. *Any occurrence, process, condition, or decision, which brings about a change in asset or equity elements* may be said to constitute a "transaction" from the accounting standpoint. With this broad conception as a basis all transactions may be divided into two main groups. First come all *explicit business events* or happenings which involve a relationship between the particular enterprise and some outside person or entity. Purchases, sales, payments, and collections are the most common main cases under this head. To maintain equitable financial relations between the enterprise on the one hand and customers, creditors, employees, and investors on the other, to insure the observance of contracts and agreements in general, to fix and control the immediate responsibilities of those charged with managerial duties, and to furnish the basic data from which—in large measure—analyses of operation and financial position are developed, a systematic record of all explicit transactions must be prepared. This is accounting at a minimum.

But the work of the bookkeeper and accountant does not end here. A bare record of business events or transactions in the narrow sense, however complete and well arranged, would reflect the financial history of the enterprise very imperfectly and would reveal almost nothing as to the facts of operation in terms of particular periods. A second types of occurrence, the *internal transaction,* must be recognized. Business operation and the passage of time brings changes in the values of assets; and the net effect of the process of conversion and expiration is a change in the status of equities, favorable or unfavorable. Labor and materials, for example, are utilized; fixed assets depreciate; a composite of costs incurred leaves the business as

deliveries of finished product are made to customers. To record and interpret such transactions and processes is the crucial part of the work of the accountant.

Mention should also be made of what may be called formal *book transactions.* Such "transactions" do not represent definite occurrences, and are not accompanied by actual changes in either asset or equity amounts. They are illustrated for the most part by the transfer entries which the bookkeeper finds it necessary to make in summarizing and drawing conclusions at the end of the accounting period.

Statement Classification of Transactions. Upon the foregoing outline of transactions may be superimposed another classification in terms of effects upon the fundamental elements of the position statement. First, certain transactions occur which affect only the assets. These may be described as exchanges of assets; in each case one or more assets is increased and another asset (or assets) suffers an equal decrease. A familiar example is found in the purchase of supplies for cash. As will appear, many business transactions—particularly in certain fields—are of this type.

Second, transactions occur which involve an increase in one or more assets and an equal increase in one or more equities. The borrowing of funds from a bank on a promissory note is an example. The investment of new capital by the proprietary interest furnishes another illustration.

Third, many business transactions bring about a decrease in one or more assets and an equal decrease in one or more equities. The payment of a liability with cash and the withdrawal of capital by the proprietor are important examples. This type of transaction, evidently, produces effects which are just the opposite of those resulting from transactions of the second class.

Fourth, transactions occur which result in an increase in one equity and an equal decrease in another. These may be conceived as exchanges of equities. This type of transaction is not as common as the other classes, but it is not exceptional, especially in the case of the corporation. Important examples are the conversion of outstanding bonds into capital stock and the exchange of one kind of capital stock for another.

All possible occurrences, processes, and situations which may be rated as transactions, subject to recording in accounting terms, can

be classified under these four heads, or under a combination of two or more of the classes indicated.

Increase and Decrease in Assets—Cash Purchases. Although cash purchases in many concerns are less important than acquisitions on a credit basis, transactions not infrequently arise in which payment for current supplies and services is made upon the occasion of receipt. The M Co., for example, acquires store supplies to the amount of $100 and makes payment in full immediately. What are the effects of this transaction? Evidently one asset, store supplies, is increased by the amount of $100 and another asset, cash, is diminished by the same amount. Proceeding in accordance with the scheme of accounts outlined in Chapter III it is necessary, to record this occurrence, to make an entry of $100 in the left column of the supplies account (representing an addition to an asset) and an entry of $100 in the right column of the cash account (representing an equal subtraction from an asset). The result is *equal entries in opposite columns*; and the underlying equation of fundamental classes of data is not disturbed. One asset is increased, but another asset is decreased by precisely the same amount. Thus the *total* of the assets remains unchanged, and the equities are in no way affected.

The purchase of services for cash also represents an exchange of asset values (assuming that the services acquired do not immediately leave the business as a part of the cost of product sold). For example, the M Co. pays freight charges on merchandise acquired to the amount of $200. This transaction is recorded by an entry of $200 in the left column of the merchandise account (or, first, in a special account with transportation costs) and an entry for the same amount in the right column of the cash account. Again there are equal entries in opposite columns, and the totals of the two underlying divisions are not disturbed.

All acquisitions of commodities and services, where payment is made in full upon receipt, are recorded in the manner indicated, and in every case there is no effect upon the fundamental equation aside from the change in the composition of asset values. Further, where securities, equipment, or any other kinds of property are purchased on the basis of immediate cash payment the process of recording is essentially that described above. By cash payment, it should be added, is meant either payment in currency or by check, and for the time being no distinction will be drawn between the account

which represents actual cash on hand and the account or accounts representing bank deposits.

The conventional interpretation of these transactions rests on the assumption that, in the absence of definite evidence to the contrary, *cost expresses fair market value at date of acquisition,* and hence constitutes the proper basis for the accounting record. It is assumed, in other words, that in all bona-fide commercial transactions the buyer receives precisely the value equivalent—no more, no less—of his expenditure. There may be room for argument as to the degree to which this postulate is applicable in practice but its propriety as an underlying conception in accounting procedure is fairly evident.

Increase and Decrease in Assets—Prepayments. As pointed out in Chapter III, payments for services are often made prior to receipt and deposits or advances in connection with the purchase of merchandise and other types of physical assets are not uncommon. All such transactions, like cash purchases, involve exchanges of asset values and do not affect the equities. The M Co., for example, pays insurance premiums amounting to $500 to cover certain risks for a period of one year from the date of payment. The transaction is recorded by an entry of $500 in the left column of the insurance account and an equal entry in the right column of the cash account. Similarly, if the M Co. orders a shipment of merchandise from another concern and encloses a check for $500 with the order, the prepayment is recorded by a left entry of $500 in an account under the name of the vendor and an entry of $500 in the right column of the cash account. In all prepayments the asset acquired consists of the right to have the services or goods furnished as agreed or, in the event that the transaction cannot be completed, of the right to have the money deposited refunded. As in other asset exchanges every case gives rise to equal entries in opposite columns.

Increase and Decrease in Assets—Conversions. The utilization of materials in production is an important case of internal conversion of asset values. Assume, for example, that materials to the amount of $100 are requisitioned from the storesroom and are placed in process of manufacture on the factory floor. This transaction is recorded by a left entry of $100 in the work-in-process account (an addition to one asset) and a right entry of $100 in the materials or stores account (an equal subtraction from another asset). Similarly, the utilization of labor in manufacturing operations would be re-

corded by a left entry in the work-in-process records and an equal right entry in the original labor cost account (assuming that labor cost, as incurred, had been recorded in a labor account rather than treated as an immediate cost of work in process).

To illustrate a transfer to finished stock assume that a particular unit or batch of product, with a total recorded cost of $2,000, is completed and is delivered to the warehouse or shipping room. The transaction is recorded by a left entry of $2,000 in the finished-stock account and a right entry of the same amount in the work-in-process account. As in preceding examples, the result is equal entries in left and right columns.

Although internal conversions are often very imperfectly recorded in practice, and seldom need be entered in the general accounts in terms of particular items of labor, materials, and other costs, it is desirable that the character of these transactions be understood and that the system of accounts be so constructed as to provide for their orderly recognition.

Increase and Decrease in Assets—Exchanges. Barter—the exchange of assets without the use of a money medium—is not very common in American business practice. Further, where one concern trades its product, or other assets, for the goods or services of another concern an element of loss or gain, to one or both parties, is likely to be involved. Nevertheless transactions do occasionally occur which can be viewed as simple exchanges of asset values, from the point of view of a particular party to the transaction. Assume, for example, that an enterprise exchanges government bonds which have a value of $5,000, and are carried in the accounts at that figure, for a parcel of real estate with an estimated fair market value of $5,000. This transaction is recorded by a left entry of $5,000 in an appropriate property account and a right entry of the same amount in the investments or bonds account. Such an exchange, evidently, is closely akin to a cash purchase, and is similarly handled.

Exchanges in which a part of the consideration is money sometimes occur. Assume, for example, that the M Co. acquires a new unit of office equipment, giving in exchange a unit which has been in use for some time—and which now appears on the books at the depreciated value of $300—and $200 in cash. Barring evidence to the contrary it is not unreasonable to construe this transaction as an even exchange and to record the deal by a left entry of $500 in the

appropriate equipment account, a right entry of $300 in the same or another equipment account, and a right entry of $200 in the cash account. (In practice, it should be remembered, transactions of this type are more likely than not to involve an element of gain or loss, and hence require different treatment.) The form of entry indicated here ignores the possibility of the use of a contra valuation account to represent accrued depreciation. This complication will be discussed later.

Exchanges of securities which can be viewed as equal trades may arise in connection with recapitalizations and reorganizations. In all such cases the transaction is recorded simply by transferring the amount at which the old investment is carried on the books to a new account (a left entry in the new account and an equal right entry in the old account) or, in cases in which the change in the character of the asset is slight, by making an adjustment in the title or description of the old account, no formal entries being recorded. An allied case occurs when a customer gives a note to cover an amount due on open account. This type of exchange is recorded by a left entry in a notes receivable account and a right entry of the same amount in the particular account receivable affected.

Increase and Decrease in Assets—Collections. When accounts receivable, notes, bonds, and other contractual claims which have been recognized on the books are collected the process results in an increase in one asset (usually cash) and a decrease in another asset represented by the right or claim. If the M Co., for example, collects $100 from a customer who owes the Company this amount the transaction is recorded by a left entry of $100 in the cash account and an equal right entry in the customer's account. A partial payment by a debtor is the same type of transaction and is similarly recorded. Where an interest-bearing security is collected, however, the transaction will involve the recognition of an element of income, and hence not be an even exchange from the standpoint of the accounting entries, unless the full amount of the interest has been accrued as an asset prior to the moment of collection. Likewise where the amount collected is more or less than the cost (or other book value) of the asset, an element of gain or loss will be involved.

Increase in Assets and Equities—Proprietary Investment. The second main class of transactions—in terms of effects upon the principal statement divisions—includes all those occurrences which result

in an equal increase in each member of the underlying equation. First under this head will be considered the case of proprietary investment. All commitments to the business by stockholders or other forms of proprietary interests increase assets by the amount of such commitment and bring about an equivalent increase in the appropriate equity. In a particular company, for example, the stockholders invest $100,000 in cash and stock certificates are issued to the investors representing the amount invested. This transaction, in summary form, is recorded by a left entry of $100,000 in the cash account and an equal right entry in the capital stock account. Where an investment by the proprietary interest takes the form of a contribution in property other than cash the procedure is essentially the same, although it is necessary in this case to place a value on the property received for the purpose of making the record. Assume, for example, that the investment of a particular stockholder takes the form of certain patent rights which he owns, and that stock is issued for the estimated fair market value of the patents, $50,000. The transaction is recorded by a left entry of $50,000 in the patents account and an equal right entry in the capital stock account. (For the time being the possible use of nominal values in connection with the issue of capital stock is ignored.)

Investments by partners and single-proprietors have essentially the same effect as investments by stockholders and are similarly recorded. For example, A and B each invest $5,000 in cash in a business undertaking. The transaction is recorded by a left entry of $10,000 in the cash account and a right entry of $5,000 in the capital account of each of the partners.

For all such transactions, evidently, equal entries appear in left and right columns, and since both members are increased by the same amount the equation of assets and equities is maintained.

Increase in Assets and Equities–Borrowing. The commitment of funds by creditors, through the process of borrowing or contractual investment, likewise brings about an equal increase in assets and equities, although in this case it is the liabilities, rather than the proprietary interests, which are expanded on the equity side. Assume, for example, that the M Co. borrows $10,000 from a bank, giving the note of the Company for sixty days. The transaction is recorded by a left entry of $10,000 in the cash account (an increase in assets) and a right entry of $10,000 in the notes payable account

(an equal increase in liabilities). An investment by bondholders—a long-term borrowing—would be similarly recorded. In all such cases there are again equal entries in left and right columns and both sides of the underlying equation are equally expanded.

Increase in Assets and Equities—Credit Purchases. A common and important kind of transaction, the credit purchase, also involves an equal increase in assets and equities. In many concerns a large percentage of the volume of business done, both as to purchases and sales, is on a time or credit basis. In some instances the liability incurred through the credit purchase of commodities and services is represented by an open book account; in other cases formal evidences of indebtedness such as notes and mortgages are issued to the vendor. For a first example assume that the M Co. buys merchandise on account from the R Co. to the amount of $1,000, and that the goods have been received and examined. The transaction is recorded by a left entry of $1,000 in the merchandise account and an equal right entry of $1,000 in an account with the R Co., the same being a specific instance of the account payable. For a second example assume that the M Co. buys a delivery truck for $1,200 and gives its thirty-day note to the vendor for the full amount. The transaction would be recorded by a left entry in the equipment account for $1,200 and a corresponding right entry in the notes payable account. The purchase of services on account would be similarly recorded. For example, assume that the M Co. incurs labor costs in a particular week, for which payment has not yet been made, amounting to $2,000. In recording this transaction it would be necessary to make a left entry of $2,000 in the labor account (or in some account representing the object on which the labor was expended) and an equal right entry in an appropriate payroll account or accounts. All of these transactions, to repeat, result in equal increase in asset values and liabilities.

Increase in Assets and Equities—Gains. The acquisition of an asset, or increase in the value of an asset, without cost, is a somewhat unusual transaction. However, if the assets of a business are increased without any accompanying reductions in other assets, and without any increase in liabilities, it is clear that the change in assets is accompanied by an equal change in proprietorship. Bequests and donations furnish illustrations. Assume, for example, that a particular concern is given a parcel of land as a factory site by an in-

terested municipality, and that the gift is outright and unrestricted. The transaction would be recorded by a left entry of the estimated fair value of the property received in an appropriate asset account and a corresponding right entry in a proprietary equity account (specially labeled to indicate the peculiar nature of the increment). Increases in value due to appreciation or accretion would be similarly recorded.

Earnings accrued or received on securities or other assets may represent a further case under this head. Assume, for example, that a concern owning government bonds receives $1,000 in interest on such bonds, no costs of any nature being incurred in connection with this receipt. This transaction is recorded by a left entry of $1,000 in the cash account and a right entry of the same amount in the interest income account (a special account provided to show the periodic increase in equities from this source). In this illustration, further, it is assumed that no part of this interest receipt had been accrued as an asset prior to the date of receipt. Where costs are assignable to earnings on investments the situation is more complex. See discussion of "revenue transactions" later in this chapter.

The net result of business operation in a given period, if favorable, constitutes an increase in asset values and is matched by an increase in equities (unless and until the amount thereof has been disbursed to owners or utilized to retire claims of creditors). Such net increase, however, is the product of the entire flow of transactions for the period and can hardly be viewed as in itself a specific type of occurrence.

Decrease in Assets and Equities. The transactions arising under this head are essentially the opposites of those involving increase in assets and equities. Payments of capital or income to stockholders or other proprietors, for example, are recorded by left entries in the appropriate proprietary accounts and equal right entries in the proper asset account (usually cash). Retirement or liquidation of liabilities, whether incurred through borrowing or credit purchases, is similarly handled. For example, a payment of accrued payroll amounting to $1,000 is recognized by a left entry of $1,000 in the payroll liability account and an equal right entry in the cash account. A transaction involving a payment to a merchandise creditor would be recorded in the same manner.

Both members of the underlying equation are equally reduced when property is destroyed (without compensation), given away, or otherwise lost. In every such case there is required a left entry in an equity account (usually some division of proprietorship) and an equal right entry in the property account affected. The net loss resulting from the operations of a given period taken as a whole likewise constitutes a decrease in both asset and equity amounts.

All of these transactions, if properly recorded, result in equal entries in left and right columns and do not disturb the equilibrium of the system.

Increase and Decrease in Equities. For an illustration of this type of transaction assume that the M Co. gives its sixty-day, interest-bearing note for $1,000 in settlement (in temporary form) of the same amount due a merchandise creditor on open account. This transaction is recorded by a left entry of $1,000 in the creditor's open account (a subtraction from one form of liability) and a right entry of $1,000 in the notes payable account (an equal addition to another form of liability). Once more the result is equal entries in opposite columns and the equation of assets and equities is maintained. Further, in this case both totals remain unchanged. The only effect of the transaction is the transfer of value from one equity to another; a part of the Company's indebtedness has been relabeled to indicate the change in its character.

Many of the examples of this type of transaction arise in connection with corporate procedure and involve matters which cannot be conveniently discussed at this point. The conversion of bonds into stocks or stocks into bonds, or the exchange of one type or grade of stock or bond for a stock or bond of a different type or grade; the segregation of sections of retained earnings under various titles; the appropriation or accruing (not the payment) of interest and dividends of various classes—these are the most important general cases.

Instances of nominal interequity transactions arise where, for purposes of summarizing or otherwise, balances representing the income or capital rights of proprietors or other investors are transferred from account to account.

Combination Transactions. The business transaction, as ordinarily defined, often represents a combination of two or more of the four underlying types. One case of this kind is found in the combination

cash and credit purchase. Assume, for example, that the M Co. buys a unit of equipment at a cost of $1,500, paying cash to the amount of $500 and giving its interest-bearing note for the balance. This transaction is recorded by a left entry of $1,500 in the equipment account (representing an increase in an asset), a right entry of $500 in the cash account (a decrease in an asset), and a right entry of $1,000 in the notes payable account (an increase in a liability). The net effect, evidently, is an increase in the asset total of $1,000 and a corresponding increase in equities. As in all other transactions the completed record shows equal entries in left and right columns.

All exchanges and conversions of assets which result in gain or loss are combination transactions. The M Co., for example, sells a parcel of land which cost $5,000 (and is carried on the books at that figure) for $6,000, cash. This transaction is recorded by a left entry of $6,000 in the cash account, a right entry of $5,000 in the land account, and an equal right entry of $1,000 in the account with retained earnings (or, first, in a special income account), assuming that there are no other costs associated with the transaction. Many transactions of this kind occur in business practice. In each case there is an exchange of asset values and the recognition of an increase or decrease—as circumstances indicate—in equities.

Revenue Transactions. There remains to be considered the most important example of the combination transaction. This is the transaction involving revenue, notably the sale of the product of the enterprise. Revenue transactions are of especial significance to the accountant in view of the fact that the income element generally first appears in recognizable form in revenues. Moreover, such transactions—representing, in essence, the exchange of a range of cost elements embodied in finished product for cash or other assets—are complex occurrences in that they cannot readily be resolved, in terms of the individual sale, into the underlying statement data.

The significance of the sale transaction and the resulting earnings element (assuming operation to be successful) from the standpoint of effects upon assets and equities can be indicated by means of a highly simplified illustration of business operation. Assume that A, a newsboy, begins business on July 1, 1949, with cash amounting to $4, a stock of papers which cost him $1, no other assets, and no liabilities. At this point A's statement would appear as follows:

A, PROPRIETOR
Position Statement
July 1, 1949

Assets		*Equities*	
Cash	$4	A, Capital	$5
Merchandise.	1		
	$5		$5

Organized into account form this statement may be rewritten:

Increases		Decreases	Decreases		Increases
CASH			A, CAPITAL		
$4					$5
MERCHANDISE					
$1					

During the day A buys additional stock at a cost of $4, cash, makes sales to the amount of $6, cash, and has no goods on hand at the close of the day's business. How shall these transactions be reflected in the accounts? The purchase of merchandise, evidently, is an ex-

Assets				*Equities*			
CASH				A, CAPITAL			
	$ 4		$ 4	Balance ✓	$6		$5
	6	Balance ✓	6				1
	$10		$10		$6		$6
Balance ✓	$ 6					Balance ✓	$6
MERCHANDISE							
	$1		$5				
	4						
	$5		$5				

change of assets, and is recorded by a left entry of $4 in the merchandise account and a right entry in the cash account for the same amount. The sale transaction, however, is a combination case; it is made up of an exchange of assets plus an equal increase in assets and equities. Of the $6 received in cash the amount of $5 can be viewed as recovery of the cost of merchandise sold, and the remaining dollar—since there are no other costs to be taken into account—measures an increase in the proprietor's equity. The transaction is therefore recorded by a left entry in the cash account of $6, a right entry in the merchandise account of $5, and a right entry in the proprietor's account of $1.

A's scheme of accounts, with these entries incorporated and the resulting balances displayed, stands as shown on the bottom of page 63. Reduced to statement form A's status at the close of business on July 1 appears as follows:

Assets		*Equities*	
Cash	$6	A, Capital	$6

The following statement shows the results of A's operations for the day:

Proceeds of Sales		$6
Applicable Costs:		
Merchandise	$5	
Other Charges	(none)	5
Net Earnings		$1

In the next chapter it is shown that for several reasons it is not feasible to record the right-hand entries involved in the specific revenue transactions of the typical enterprise directly in basic statement accounts as was done in this simple case. Instead, special intermediate accounts are required to exhibit sales or other forms of revenue, accounts which are periodically resolved into their primary elements. In this connection it is intended only to emphasize the fact that the revenue transaction, like other transactions, consists essentially of asset and equity elements, and that *if all the data are immediately available* it can be recorded at once in the appropriate basic accounts.

Transactions Between Owners and Business Entity. Since the corporation is a distinct legal entity it may enter into transactions with particular stockholders or other investors. Thus the corporation

may buy services or property from a stockholder, or sell product or other goods and services to the stockholder. Such transactions should be recorded in the same manner as dealings with outsiders, assuming that they are conducted on a fair, commercial basis.

In the partnership, where there is no distinct entity in the eyes of the law, the case is not quite so clear. However, the most practicable way to insure the maintenance of equitable relations between members of the firm is to treat each partner as an outsider in all transactions in which the partner is acting otherwise than in his capacity as a member of the firm. For example, if product is furnished to a particular partner the transaction should generally be regarded and recorded as a sale, on the basis of regular selling price. Or if the partner furnishes special services to the business the transaction should be conducted on a commercial basis, and recorded in the same manner as the purchase of services from an outsider.

In the single-proprietorship, however, it is rather artificial to assume that the proprietor and the business entity are separate and distinct parties, capable of undertaking transactions, and there is no consideration of equity between owners to be served by such assumption. In general, therefore, it is good procedure in the single-proprietorship to handle all drawings of merchandise or other assets by the proprietor for personal use on a cost basis as deductions from the proprietor's equity rather than as sales; the owner cannot make a profit or suffer a loss by selling goods to himself. Similarly it is rather farfetched to interpret the debits arising from any type of proprietor's drawing as an operating expense, a form of salary. On the other hand, in special cases the treatment of the owner as an outsider may be justified from the standpoint of departmental analysis.

Effects of Transactions—Summary. An analysis of all types of business transactions discloses the fact that in every transaction at least two distinct effects are found, and that in each case left and right elements are paired. All transactions, in other words, are *two-sided,* and yield equal entries in opposing columns of the scheme of accounts. The various possible groupings of quantitative effects (with proper columnar designations attached) can be tabulated as follows:

1. $\begin{cases}\text{Increase in assets (left)}\\ \text{Decrease in assets (right)}\end{cases}$

2. $\begin{cases}\text{Increase in assets (left)}\\ \text{Increase in equities (right)}\end{cases}$

3. Decrease in equities (left)
   Decrease in assets (right)

4. Decrease in equities (left)
   Increase in equities (right)

In the first of these cases, evidently, only the assets are affected, and with respect to particular items rather than total; in the second and third both of the fundamental divisions are equally expanded and contracted, respectively; the fourth case represents transpositions or exchanges of equity values.

The above list covers the entire range of possibilities. An asset can be increased only as another asset is decreased or as an equity is increased by a like amount; and an asset can be diminished only as another asset is equally augmented or as an equity is equally reduced. Similarly, a particular equity can be increased only as another equity is correspondingly decreased or as an asset is increased; and a subtraction from an equity can only be explained by an equal addition to another equity or by an equal subtraction from an asset.

A particular business transaction may represent a combination of two or more of the fundamental groupings. The most complex and important example is the typical revenue transaction.

Debit and Credit. In business usage the left column of all accounts is designated as the *debit* column or side, and the right column is referred to as the *credit* column or side. (The abbreviations "Dr." and "Cr." are commonly employed as column headings.) To make an entry in the left column of an account, accordingly, is to "debit" the account, and to make an entry in the right column is to "credit" the account. The entries themselves, moreover, are known as "debits" and "credits." Mention should also be made in this connection of the use of the term "charge" as a synonym for "debit."

Debit and *credit* as used in present-day accounting must be distinguished from the etymologically related terms *debtor* and *creditor*. It is true that in the case of accounts with persons or other legal entities debit and credit entries can be construed as signifying the debtor and creditor status, respectively. A customer who buys goods on account from the M Co., for example, becomes thereby indebted to, or is a debtor of, the Company, and the amount debited or charged to his account expresses the original amount of his indebtedness. Similarly, a concern from whom the M Co. buys on account becomes the creditor of the Company, and the account of such

creditor is "credited" with the amount involved. But the entries in the left column of *all* accounts are debits and the entries in the right column of *all* accounts are credits, and in the case of accounts with impersonal factors such as buildings, equipment, materials, labor services, etc. the recorded entries in no sense reflect debtor and creditor relationships.

Debit and Credit Rules. The subject of double-entry bookkeeping has been rendered needlessly mysterious and difficult through the use of arbitrary and unreasonable rules of debit and credit. Particularly unfortunate has been the persistent attempt to attach a single interpretation or meaning to each of these signs which would hold in every instance. In the nature of the case it is impossible to do this. There are two fundamentally distinct groups of accounts involved (ignoring the division of equities into proprietary and liability elements) and therefore each of the two columns or sides with which the system is provided must do double duty—take care of at least two distinct types of entries. Under these circumstances efforts to ascribe an underlying universal significance to all debits or to all credits are bound to fail, even where supported by personification of accounts and other artificial devices.

The translation of the particular transaction into debit and credit terms depends primarily upon analysis and understanding of data rather than upon definite rules. In the first place the facts must be approached from the point of view of the specific enterprise whose accounts are under consideration. The second step consists of the determination of the component asset and equity elements. Which assets and which equities of the enterprise are involved? Next must be ascertained the quantitative effects upon the particular accounts which have been selected. The final step, which follows almost as a matter of course, is the recording of the entries under the proper headings and with appropriate columnar (debit and credit) distribution.

In summarized form the significance of debit and credit entries may be tabulated as follows:

Debits	*Credits*
1. Increases in assets	1. Decreases in assets
2. Decreases in equities	2. Increases in equities

This is nothing more than a statement of underlying quantitative changes and serves merely as a general guide. It must be borne in

mind that every asset or cost element, fixed or current, is handled in essentially the same manner. The fact that two quite distinct elements, proprietorship and liabilities, are included under equities must not be forgotten. Further, as will be explained in Chapter V, the use of intermediate and supplementary accounts to record special phases of assets and equities gives rise to additional, though not fundamentally distinct, applications of the terms debit and credit.

Double-Entry Bookkeeping. The scheme of accounts and entries which has been outlined in the preceding pages is commonly characterized as the "double-entry" system. The underlying basis of the system is the classification of all financial data into the two fundamental divisions, assets and equities. In its broadest aspect, accordingly, double-entry may be defined as a *method of accounting which is designed to furnish an orderly, continuous record of the assets and equities of the business enterprise.* In a somewhat narrower and more technical sense double-entry is the system which makes use of parallel-column accounts (and other special devices) in accomplishing this essential purpose. It follows that double-entry bookkeeping is by no means an arbitrary method of procedure; it is a rational and effective mechanism which is grounded in the very nature of the business enterprise and the effects of business operation.

In its skeleton form the double-entry system is evidently a relatively simple structure and may be readily mastered. In business practice, however, the fundamental scheme is often elaborated into a veritable maze of accounts, books, and documents, knit together by a correspondingly complex network of technical procedures, and a complete understanding of such a system requires an intimate acquaintance with the conditions of the specific situation as well as a knowledge of the essential principles.

It is a common impression that the double-entry system is *duplicate* bookkeeping, that it is a procedure by means of which every fact is recorded twice with the resulting advantage, from the standpoint of promoting accuracy, of making it possible to check one record against the other. Such an impression, not surprising in view of the use of the term "double-entry," is largely unjustified. Double-entry is not *double* or carbon-copy accounting. It is rather a system of *complete* accounting, a system under which every change in the status of a financial element of the enterprise is recorded *once,* and once only. It is true that double-entry bookkeeping requires equal entries in

opposing columns for each transaction, but this is not a question of duplication. Every transaction has an essential two-sidedness, involves at least two distinct effects, and double-entry is an effective method by which all financial changes are recorded.

Illustrative Problem. A comprehensive example will serve to summarize this discussion of the analysis of the various types of transactions into debit and credit entries and emphasize the fact that the entire process of operation, including sales to customers and the absorption of applicable costs, can be recorded directly in terms of the underlying classifications, provided all of the necessary data are made available.

Data

The Crown Smelting Co. buys all raw material from one source, New Mines, Inc., and sells all of its product to Stockton Metal Works. The land and buildings used are owned by H. R. Leach. The accounts of the Company as of the beginning of business on January 1, 1949, correctly reported, stand as follows:

Debit Balances		*Credit Balances*	
Cash	$10,000	New Mines, Inc.	$ 5,000
Government Bonds (Cost)	6,000	Notes Payable	10,000
Interest Accrued Receivable	100	Interest Accrued Payable	300
Stockton Metal Works	10,000	Wages Payable	200
Materials	10,000	H. R. Leach	300
Supplies	1,000	Capital Stock	50,000
Insurance Prepaid	375	Retained Earnings	200
Equipment	28,525		
	$66,000		$66,000

The following is a *complete* summary of transactions and operations for January:

(1) As of January 1, 1949, government bonds with a book value of $2,540 (this figure includes accrued interest in the amount of $40) are sold for cash, the amount received being $2,600.
(2) As of January 1, 1949, the entire amount of notes payable, with the interest accrued, is paid in full.
(3) Purchases of materials from New Mines, Inc., on account, $20,000.
(4) Purchases of supplies for cash, $700.
(5) Payment to Leach of rent for December, 1948, $300.
(6) Cost of use of land and building in January, acquired on account from H. R. Leach, $300.
(7) Payment to Leach of rent for January, $300.
(8) Labor costs incurred, on account, $7,000.
(9) Payments to employees during month, $6,800.
(10) Total amount of interest accrued on government bonds on January 31 is $70.
(11) Payments to New Mines, Inc., $21,000.
(12) Sales of product to Stockton Metal Works, on account, at selling prices, total

$30,000. The costs assignable to these sales (and other earnings) are as follows:

Materials	$21,100
Labor	7,000
Supplies	800
Insurance	25
Use of land and buildings (rent)	300
Equipment (depreciation)	300
	$29,525

There is no work in process or finished product on hand at the end of the month.
(13) Collections from Stockton Metal Works, $32,000.

Directions

(*a*) Open skeleton accounts corresponding to the 15 titles shown in the tabulation above and record therein the balances given as of January 1, 1949. Open two additional accounts: Use of Land and Buildings; Labor Cost.

(*b*) Using *only* the 17 accounts opened as directed under (a) record with appropriate entries the data of transactions and operations given for the month of January. Identify the entries through the use of the numbers attached to the data given above.

(*c*) Present a tabulation of debit and credit balances as of January 31, 1949, following the form shown above at the opening of business, January 1.

(*d*) Prepare an income statement for January and a position statement as of January 31, 1949.

Solution

CROWN SMELTING COMPANY

Skeleton Accounts for January, 1949

CASH

√	$10,000	(2)	$10,300
(1)	2,600	(4)	700
(13)	32,000	(5)	300
		(7)	300
		(9)	6,800
		(11)	21,000
		√	5,200
	$44,600		$44,600
√	$ 5,200		

GOVERNMENT BONDS

√	$ 6,000	(1)	$ 2,500
		√	3,500
	$ 6,000		$ 6,000
√	$ 3,500		

EQUIPMENT

√	$28,525	(12)	$ 300
		√	28,225
	$28,525		$28,525
√	$28,225		

NEW MINES, INC.

(11)	$21,000	√	$ 5,000
√	4,000	(3)	20,000
	$25,000		$25,000
		√	$ 4,000

NOTES PAYABLE

(2)	$10,000	√	$10,000

INTEREST ACCRUED PAYABLE

(2)	$ 300	√	$ 300

INTEREST ACCRUED RECEIVABLE

✓	$ 100	(1)	$ 40
(10)	10	✓	70
	$ 110		$ 110
✓	$ 70		

WAGES PAYABLE

(9)	$ 6,800	✓	$ 200
✓	400	(8)	7,000
	$ 7,200		$ 7,200
		✓	$ 400

STOCKTON METAL WORKS

✓	$10,000	(13)	$32,000
(12)	30,000	✓	8,000
	$40,000		$40,000
✓	$ 8,000		

H. R. LEACH

(5)	$ 300	✓	$ 300
(7)	300	(6)	300
	$ 600		$ 600

MATERIALS

✓	$10,000	(12)	$21,100
(3)	20,000	✓	8,900
	$30,000		$30,000
✓	$ 8,900		

USE OF LAND AND BUILDINGS

(6)	$ 300	(12)	$ 300

LABOR COST

(8)	$ 7,000	(12)	$ 7,000

SUPPLIES

✓	$ 1,000	(12)	$ 800
(4)	700	✓	900
	$ 1,700		$ 1,700
✓	900		

CAPITAL STOCK

		✓	$50,000

RETAINED EARNINGS

✓	$ 745	✓	$ 200
		(1)	60
		(10)	10
		(12)	475
	$ 745		$ 745
		✓	$ 745

INSURANCE PREPAID

✓	$ 375	(12)	$ 25
		✓	350
	$ 375		$ 375
✓	$ 350		

CROWN SMELTING COMPANY

Account Balances, January 31, 1949

Debits		*Credits*	
Cash	$ 5,200	New Mines, Inc.	$ 4,000
Government Bonds	3,500	Wages Payable	400
Interest Accrued Receivable	70	Capital Stock	50,000
Stockton Metal Works	8,000	Retained Earnings	745
Materials	8,900		
Supplies	900		
Insurance Prepaid	350		
Equipment	28,225		
	$55,145		$55,145

CROWN SMELTING COMPANY
Income Statement
Month of January, 1949

Sales	$30,000	
Other Income (income on sale of bonds $60 and interest earned $10)	70	$30,070
Applicable Costs:		
Materials	$21,100	
Labor	7,000	
Supplies	800	
Depreciation	300	
Rent	300	
Insurance	25	29,525
Earnings of Stockholders		$ 545
Retained Earnings, January 1, 1949		200
Retained Earnings, January 31, 1949		$ 745

CROWN SMELTING COMPANY
Position Statement
January 31, 1949

Assets

Current:		
Cash	$5,200	
Government Bonds	3,500	
Interest Accrued Receivable	70	
Accounts Receivable (Stockton Metal Works)	8,000	
Materials	8,900	
Supplies	900	
Insurance Prepaid	350	$26,920
Fixed:		
Equipment (less accrued depreciation)		28,225
		$55,145

Equities

Current Liabilities:		
Accounts Payable (New Mines, Inc.)	$ 4,000	
Wages Payable	400	$ 4,400
Long-Term Liabilities		none
Stockholders' Equity:		
Capital Stock	$50,000	
Retained Earnings	745	50,745
		$55,145

Comments

In the set-up of skeleton accounts check marks (√) have been used to designate opening and closing balances and dates have been omitted. Ideally any "applicable costs" assignable to the income on sale of bonds and interest accrued should have been separately computed and recorded in connection with transactions (1) and (10); it is in effect assumed here that no such costs can be distinguished. Tax costs are ignored in this example. It is noticeable that the position statement represents a rearrangement of final account balances.

Questions

1. Define and illustrate the "explicit" transaction. The "internal" transaction. The "book" transaction.

2. From the standpoint of effect upon assets and equities classify business transactions into four groups.

3. Illustrate the cash purchase and indicate precisely how such a transaction is recorded and the effect upon the underlying equation. Do the same for the prepayment.

4. Illustrate the asset conversion and show how it is recorded. Do the same for asset exchanges and collections.

5. Indicate precisely how proprietary investment, borrowing, and credit purchases are recorded and the effect upon the underlying equation in each case.

6. Give an illustration of a transaction involving a reduction of proprietary investment and state how it would be recorded. Do the same for payment of indebtedness.

7. Illustrate the transaction involving a gain and indicate how such a transaction would be recorded and the effect upon the underlying equation. Do the same for a transaction involving loss.

8. Give an illustration of an equity exchange and explain its effect upon the accounts and the position statement.

9. What is meant by a "combination" transaction? Give an illustration and state how it would be recorded.

10. What is meant by the "revenue" transaction? Trace the underlying effects of a simple example.

11. Can you give an example of a transaction involving an increase in assets and a decrease in equities? Explain.

12. "In accounting for the operation of the single-proprietorship it is important that expenses be charged with the estimated worth of all personal services furnished by the proprietor, as otherwise net income will be overstated. It is not necessary, however, that the proprietor actually draw the amount of his salary regularly." Discuss.

13. Define the terms *debit* and *credit* as used in modern accounting. Why is it impossible to give a single meaning, from the standpoint of fundamental business elements, to either of these terms?

14. Define double-entry bookkeeping. Show that double-entry is not duplicate accounting.

V

INCOME-STATEMENT ACCOUNTS

Need for Supplementary Accounts. In the preceding chapters the nature and use of typical asset, liability, and proprietary accounts have been explained, and the way in which the asset division may be expanded to provide accounts for the current cost elements, in their many forms and phases, has been indicated. It has also been shown that the effects of all types of business transactions and operations, including ordinary revenue transactions and other activities giving rise to gain or loss, can be recorded in terms of quantitative changes in assets and equities, *provided all of the underlying facts are available.* It is now necessary to consider those features of business operation and administration which make it inexpedient if not impossible, in the typical concern, to analyze the data of sales and other revenue transactions *immediately* into the basic elements, and which require the use of temporary, intermediate accounts to supplement the primary records.

There are three main reasons for the use of supplementary accounts in dealing with revenues: (1) the intrinsic difficulties involved in determining the costs assignable to revenues; (2) the clerical advantage of the roundabout method of procedure; (3) the managerial significance of the operating data. Each of these matters is sufficiently important to deserve brief discussion.

Determining Costs of Revenues. The origin of the expense and revenue accounts, fundamentally, lies in the fact that the measurement of the cost of product sold, or of other forms of revenue, is a problem which presents inherent difficulties. Ascertaining the amount of assets purchased or otherwise acquired is a relatively simple matter as a rule (although where payment is made on other

than a cash basis the total actual value is not always apparent and there is also in some cases a question as to the distribution of total cost in the various accounts affected). Determining the amount of expired asset values, on the other hand, and particularly the amount of such values assignable to revenues, is by no means an easy task. Especially is this true with respect to the individual revenue transaction. It is sufficiently difficult to ascertain an approximate expense figure for the month, quarter, year, or other relatively long period; it is well-nigh impossible, in many cases, to isolate the total cost—including all services involved—of the *specific sale* or other item of revenue.

The assignment of costs is especially troublesome for the wide range of factors included under "indirect" charges, so-called. Accurate tracing of the costs of direct materials and labor services (those costs which it is possible to assign to specific units or lots of output on the basis of more or less obvious physical relationships) in terms of particular internal operations and, finally, specific revenue transactions, is not out of the question in many cases, but it is scarcely possible to say the same of the indirect or overhead costs, notwithstanding the marked development of methods of cost analysis in recent years. How should the costs of insurance and advertising services, for example, be allocated to particular units of output? What part of the periodic outlay for the services of administrative officers attaches to the individual sale? It is evident that answers to such questions cannot as a rule be based upon definite knowledge or exact determinations. In fact experience has amply demonstrated that even in the treatment of periodic aggregates of overhead charges judgment and estimate must play a large part.

Further, there are certain processes of long-term value expiration which have little or no definite relationship to the particular revenue transaction. The leading example is the depreciation of fixed assets such as buildings and equipment. It is universally recognized that such assets have a limited economic life and it is assumed that they lose their value more or less continuously as a result of the conditions of operation and other influences. There is, however, no unanimity of opinion as to the proper method to be followed in assigning such costs to periodic revenues, and the obstacles in the way of ascertaining the ebb of fixed-asset costs precisely in terms of specific shipments or sales of product are obvious.

Clerical Basis for Supplementary Accounts. Even if it were possible or practicable to ascertain accurately all of the costs, direct and indirect, applicable to a particular sale of product it would not in general be expedient from the standpoint of efficient bookkeeping to recognize the expired values in detail upon the occasion of recording the sale. To do so would require credit entries, in many cases for very small amounts, in all of the asset and current cost accounts involved, a needlessly elaborate procedure. Suppose, for example, that a clothier sells a hat for $5 in cash, and that the costs assignable to this transaction are found to be as follows: merchandise cost, $3.50; store labor costs, 35¢; depreciation of store building, 1¢; depreciation of store equipment, 2¢; store supplies, 3¢; depreciation of delivery equipment, 2¢; delivery labor and other delivery charges, 8¢; depreciation of office equipment, ½¢; clerical services, 10¢; office supplies, 1¢; administrative services, 10¢; insurance, ½¢; heat and light, 2¢; advertising services, 3¢; taxes, 22¢; miscellaneous factors, 3¢. It would evidently be necessary in this case, if the sale were recorded at once in final form, to make credit entries in the accounts representing the sixteen classes of fixed and current costs listed, in addition to the debit to the cash account and the credit to the appropriate equity account for the net income realized of 47¢; a total of eighteen entries. As will be explained shortly, the use of the revenue account reduces to two the number of entries immediately required to record the typical sale, and makes it possible to adjust fixed assets and current costs by means of a single series of entries applicable to the revenues of a particular period.

While the example given is purely hypothetical it is not unreasonable for the purpose in hand. In many enterprises, in fact, a much greater number of accounts would be affected than is suggested by the classification of charges in this case. It is true that in the manufacturing field the cost system in use may result in the collection of many of the production costs in a finished stock account prior to the occasion of recognizing shipments to customers, but even here there is usually a considerable fringe of administrative and selling charges, and important elements of taxes, which have not been included in assigned costs and which must be taken into account in determining net income or loss.

Importance of Revenue and Expense Data. Supplementary operating accounts would be desirable for managerial purposes even if it

were feasible to reduce each revenue transaction directly to asset and equity terms. Such accounts have intrinsic statistical significance in that they throw light on the process by which the periodic changes in financial conditions are brought about. The volume of revenue is an important criterion of business activity and deserves independent recognition in one or more special accounts notwithstanding the fact that it is an intermediate element which will later be broken down into the primary factors. Expense, the cost of revenue, is likewise a figure of the utmost consequence to the management, and in many cases the proper control of this factor requires the use of an extensive classification of cost and expense accounts.

The revenue and expense accounts furnish an important part of the data which, when appropriately combined and arranged, constitute the income statement, one of the two main reports prepared by the accountant.

Nature of Revenue. It is a widely accepted dictum of accounting and business practice that *revenue is realized only through the completed sale of goods or the furnishing of services,* and while there are special situations in which modification of this doctrine has some justification it will be adopted here for the time being as applicable to all enterprises. The volume of revenue, accordingly, is determined by the amount of cash, receivables, or other valid assets which are added to the resources of the business as a result of transferring product to customers or patrons. It is important to recognize, however, that from a technical point of view revenue is not a designation for these new assets. The revenue account is *measured by* the cash and other assets derived from sales of product but it does not *represent* the assets. The additions to assets effected through sales are recorded (as are all additions to assets) by means of debit entries in the appropriate asset accounts. It is the credits involved which require special treatment, and the revenue record represents these credits in preliminary form. Revenue is an *aggregate of all decreases in asset and cost factors attributable to the volume of business in question and the addition to equities (income) which arises out of the fact that the proceeds of the sale—assuming operation to be successful—exceed the expirations involved.* In all those cases where the costs of revenue exceed the new asset values accruing from sales the revenue figure evidently represents only the portion of the costs or expense equivalent to such new values.

Revenue should not be confused with net income. Under favorable conditions revenue contains an element of earnings, but this may be a relatively small fraction of the total volume of business. In most enterprises a large percentage of receipts from customers is required to replenish the stream of asset values (fixed and current) essential to continued operation, and to pay taxes. In this connection it may be noted that the use in income statements of the term "gross profit"—meaning revenue less some but not all expenses—is unfortunate.

Neither should revenue be confused with receipts in the sense of the flow of cash into the business. As has been stated, the criterion of revenue which is almost universally followed, especially in the trading and manufacturing fields, is the sale of product, and such sales are often on a credit basis. It is customary, in other words, to recognize ordinary receivables as assets, a practice which is adequately supported by legal sanctions.

Nature of Net Income. Net business income may de defined as the *amount by which the equities of the proprietors, and all others furnishing capital and entitled to participate in income, are increased as a result of successful operation.* As indicated above it is one of the two major elements implicit in revenue, and although usually less important quantitatively than cost, it is a figure of outstanding significance, the goal of a large part of the accountant's efforts.

The technical nature of net income may be emphasized by consideration of an extreme case, drawn from without the field of business proper, in which revenue and net earnings are identical. Suppose that A, an individual who has retired from active business, has $25,000 invested in utility bonds at four per cent, no other assets, and no liabilities. His balance sheet would evidently stand as follows:

Assets		*Equities*	
Utility Bonds	$25,000	A, Capital	$25,000

During the following year interest accrues in A's favor amounting to $1,000. How would this affect his financial status? Assuming that no costs whatever are incurred in the process of collecting this income, and ignoring taxes and all other possible charges, it is clear that the entire income transaction results simply in an addition to assets of $1,000 and a corresponding increase in A's equity. Assuming, further, that the interest accrued has been realized in cash and

deposited in the bank, A's financial position at the close of the year may be represented as follows:

Assets		*Equities*	
Cash in Bank	$ 1,000	A, Capital	$26,000
Utility Bonds	25,000		
	$26,000		$26,000

This shows that since there has been no decrease in asset values in this case the increase in assets as a result of "operation" is matched by an equal increase in equities. The revenue credit, in other words, includes no expired values or expenses and is consequently a clear-cut equity element.

It follows that if all necessary goods and services which an enterprise required in carrying on its activities were imperishable (in the economic as well as the physical sense), and hence could be utilized for an unlimited time without the incurring of further charges, there would be no expense or cost of revenue to recognize and the revenue transaction would bring about a direct increase in equities equivalent to the increase in assets realized. Such conditions, of course, are seldom if ever approximated, and certainly are not found in the case of the typical enterprise. Business assets and costs incurred are not at all like the widow's cruse of oil. In the case of current commodities and services replacement is a more or less continuous process; and the typical fixed asset must be renewed every few years. Net income, in general, is the balance of gross revenue after all applicable costs and other charges have been deducted, and the ascertaining of expenses and other deductions is an essential part of the typical process of income accounting.

Use of Sales Account. Throughout the extractive, manufacturing, and trading fields the general designation for the revenue account is "Sales." By means of this account a record is made of the volume of business for each period; and at the close of each accounting period the sales account is analyzed and reduced to its lowest terms in the process of ascertaining net income and financial status. As each sale is made *the revenue account is credited and the asset acquired is booked as a debit.* If the M Co., for example, sells product to A, a customer, amounting to $1,000, selling value, the transaction is recorded by a left or debit entry in A's account, an account receivable, of $1,000, and an equal right or credit entry in the sales account. Under this procedure the increase in assets is ex-

plicitly recognized when the sale is recorded; the accompanying decreases in resources and increase in equities (if conditions are favorable) are not recorded as such. Instead there is entered in the sales account an undistributed, unassigned credit for the total. The equation of debits and credits is thus maintained, and from the columnar standpoint the accounts are correct. The provisional aspect of the record lies in the fact that the revenue account contains in suspended form credits to asset and current cost accounts, together with a credit to equities for the income element, if any.

If one is to understand fully the procedure in accounting for revenues and expenses it is essential that the technical significance of the sales account be clearly seen. This account, to repeat, represents in the typical case two distinct classes of entries: (1) decreases in asset values (including current cost factors) which are assignable to sales; (2) additions to equities (primarily proprietorship) resulting from profitable operation. Each of these elements, in accordance with the scheme outlined in preceding chapters, belongs in the credit column, and therefore the entry in the sales account is properly a *credit*. At the close of the period the decreases in asset values must be distributed among the accounts representing equipment, materials, labor, and other factors utilized in production (except to the extent that these costs have already been gathered together in records of work in process and finished goods), and the balance, net income, may then be transferred to the appropriate equity account or accounts. If operation results in a loss there is of course no favorable balance to be transferred, and the amount of the deficiency—the excess of the expired values over the volume of revenue—must be deducted from the equities.

In many cases conditions justify the use of a number of sales accounts. If the needs of the management call for a classification of revenue by kinds of output or by departments, a separate account should be set up for each class of sales. The use of a system of sales accounts in lieu of the single account, however, involves no additional principles or rules of consequence. When making entries in classified revenue accounts care must of course be taken to select the proper account in each case.

In enterprises which furnish services rather than tangible goods the term "sales" is usually not employed in the captions of revenue accounts. The railways use such titles as "passenger revenue" and "freight revenue"; the revenues of brokerage houses are in the form of "commissions"; professional firms secure "fees" for their services;

and so on. The gross revenue accounts of such concerns, however, have essentially the same significance as the sales accounts of traders and manufacturers, and are dealt with in a similar manner.

Technical Significance of Expense Charge. The technical necessity for the true expense entry arises in connection with the process of distributing the provisional revenue credit among the underlying accounts affected. When the amount of expired values assignable to the revenues of the period has been finally determined (by means of inventories and other types of valuations and accruals), it is necessary to allocate the appropriate part of the revenue total to the various asset and current cost accounts. This is accomplished by means of debits or charges to revenue and credits to the accounts representing buildings, equipment, materials, labor, etc. In this way the suspense entry recording the expired cost factors in the aggregate is apportioned among the accounts in which such costs appear.

A simple hypothetical case may be used as an illustration. A small retailer has no fixed assets and furnishes all services required himself. In his first period of operation he buys merchandise at a cost of $1,000, and his sales during the same interval total $1,500. At the close of the period, before inventory has been taken and income determined, his merchandise and revenue accounts would appear, in skeleton form, as follows:

MERCHANDISE	
$1,000	

SALES (REVENUE)	
	$1,500

At this point it is found that the goods on hand amount to $200, cost. It follows that the amount expired, the cost of sales, is $800. Of the credit of $1,500 to revenue, then, the amount of $800 must now be transferred to the credit side of the merchandise account. This is accomplished by a debit to the sales account of $800 and a corresponding credit to the merchandise account. With these entries recorded the accounts named would stand as follows:

MERCHANDISE	
$1,000	$800

SALES (REVENUE)	
$800	$1,500

What is the technical significance of this debit to revenue? It represents one step in the transfer of the cost element from the sales account to the accounts representing assets and costs incurred; it cancels the suspended credit covering expired values in the supplementary account and thus makes it possible to rewrite this credit in terms of the asset and current cost accounts affected. In this example, of course, only a single asset, merchandise, is involved. In the typical case the cost-of-sales figure, properly broken up, would be credited to a considerable number of accounts.

This charge to revenue covering the total cost of sales represents *expense.* It measures the expiration of all asset values which may be conceived as having left the business embodied in sales of product for the accounting period in question. Expense may therefore be defined as *the cost of the volume of revenue arising in the particular period.*

Need for Expense Accounts. But expense is more than a mere adjusting entry in the revenue account. Expense is the periodic cost of operation, from the income-statement standpoint, and hence is one of the outstanding statistical facts of the business enterprise, of major importance to the immediate management. Expense is the primary *limiting factor,* the amount by which revenue must be reduced before net income is disclosed. It follows that the curtailment of expense widens the favorable margin quite as effectively as does increase in revenue, sales; and the effect on income of an increase in the operating charge is evidently similar to that resulting from a contraction in the volume of business. In their quest for earnings the owners and managers of the enterprise are accordingly vitally interested in the statistics of expense, and adequate expense accounting becomes a matter of the utmost consequence.

In view of these considerations the expense charge is initially set up in a special account rather than being recorded directly in the revenue account. Further, it is usually desirable to establish a true expense account for each important class or type of expense. In other words, a system or classification of expense accounts is required; and in the large and complex enterprise such a system may include as many as several hundred distinct expense (or current cost) accounts or records. This is one of the points, in fact, at which the accounting structure is subject to marked extension and elaboration.

Expense and Revenue Summary. It is noticeable that the individual expense and revenue accounts are essentially one-column accounts

(although the two-column form is usually employed, for the sake of uniformity and to provide a convenient means of recording adjustments and transfer entries). That is, revenue is a credit and expense is a debit, and the two elements taken together constitute a single account, of which revenue is the positive side and expense the negative. Further, the use of such a summary is a fundamental technical requirement. Individual expense and revenue headings should be recapitulated in a master summary to permit a determination of income or loss. To such a summary the balances of specific expense and revenue accounts are transferred, and the balance of the summary, favorable or unfavorable, is then incorporated in the appropriate equity accounts.

In practice the use of the summary expense and revenue account is imperfectly developed. Often expense and revenue entries and allocations of net earnings are indiscriminately intermingled in a "profit and loss" account. However, the use of a distinct account for the purpose of summarizing revenues and expenses is recommended, particularly in view of the fact that such practice tends to promote a proper arrangement of items in the income report. It should be added that a summarizing of expenses and revenues through the use of one or more intermediate accounts, in addition to the final summary, is justified in some cases, particularly where it is desired to emphasize departmental results.

Comparison of Direct and Indirect Methods. To emphasize and make more clear the foregoing discussion of expense and revenue accounts, a concrete comparison of the direct and indirect methods of recording operating data will be presented. In terms of a very simple example expense and revenue will be accounted for: (1) by means of asset and equity accounts only; (2) by means of a system which includes a revenue account, an expense account, and an operating summary. The single revenue and expense accounts employed under the second method will be assumed to be representative of the more or less extensive classifications of supplementary accounts.

At a particular moment the position statement of A, a fruit vender, stands as follows:

Assets		*Equities*	
Cash	$ 20	Avenue Fruit Market	$ 10
Merchandise	100	A, Capital	110
	$120		$120

The operations for the following week, summarized, are as follows: (1) purchases of merchandise, on account from Avenue Fruit Market, $125; (2) sales, all for cash, $200; (3) payments on account to Avenue Fruit Market, $115; (4) A draws $60 from the business for living expenses; (5) cost of merchandise sold during week (determined by taking an inventory), $135. It is assumed that there are no costs of operation other than merchandise, and no taxes or other special deductions. Opening skeleton asset and equity accounts and recording these data directly therein gives the following:

CASH

√	$ 20	(3)	$115
(2)	200	(4)	60
		√	45
	$220		$220
√	$ 45		

AVENUE FRUIT MARKET

(3)	$115	√	$ 10
√	20	(1)	125
	$135		$135
		√	$ 20

MERCHANDISE

√	$100	(2) (5)	$135
(1)	125	√	90
	$225		$225
√	$ 90		

A, CAPITAL

(4)	$ 60	√	$110
√	115	(2) (5)	65
	$175		$175
		√	$115

The resulting position statement would be as follows:

Assets		*Equities*	
Cash	$ 45	Avenue Fruit Market	$ 20
Merchandise	90	A, Capital	115
	$135		$135

Repeating the process, but with the addition of supplementary accounts as indicated above, results in the scheme shown on page 85.

The difference between the two procedures should be carefully noted. Purchases, payments on account, and proprietary withdrawals are handled in precisely the same way in both cases; the variation lies in the treatment of sales and cost of sales. By the first method sales are recorded by a debit to the cash account of $200 (addition to assets), a credit to merchandise of $135 (subtraction from assets), and a credit to A's equity account of $65 to reflect the amount

CASH

√	$ 20	(3)	$115
(2)	200	(4)	60
		√	45
	$220		$220
√	$ 45		

AVENUE FRUIT MARKET

(3)	$115	√	$ 10
√	20	(1)	125
	$135		$135
			$ 20

MERCHANDISE

√	$100	(5)	$135
(1)	125	√	90
	$225		$225
√	$ 90		

A, CAPITAL

(4)	$ 60	√	$110
√	115	(8)	65
	$175		$175
		√	$115

SALES (REVENUE)

(6)	$200	(2)	$200

COST OF SALES (EXPENSE)

(5)	$135	(7)	$135

EXPENSE AND REVENUE

(7)	$135	(6)	$200
(8)	65		
	$200		$200

earned. By the second method a temporary credit of $200 is lodged in the sales account in lieu of the credits to merchandise and to proprietorship. Cost of sales is then recorded as a separate adjustment by means of a credit to merchandise and a debit to the expense account; revenue and expense are transferred to the summary (entries numbered 6 and 7); and the net income is transferred from the summary to the capital account (entries numbered 8). The final results are obviously the same under both treatments.

The use of reference numbers in the example is for the purpose of making it easier to identify particular entries, and the check marks (√) are labels for balances and balancing entries. The three supplementary accounts are centered under the primary asset and equity

accounts for the purpose of emphasizing their subordinate position as intermediate phases of the two underlying divisions. It almost goes without saying that it is not necessary in practice to maintain these spatial relationships.

In this simple situation the more elaborate procedure of the second method may seem quite unnecessary, but when the conditions of typical business operation are recalled its reasonableness is clear. If he attempts to use the direct method A must either postpone all definite accounting for sales until the end of the week, or else he must ascertain, transaction by transaction, item by item, the cost of goods sold. This would amount to keeping a continuous inventory. When it is remembered that in most enterprises there are a considerable number of different costs involved instead of a single type of operating expense, and that it is particularly difficult to attach some of these costs to individual sales, the necessity for the indirect method becomes apparent. The advantages to be derived by the management from the explicit presentation of expense and revenue elements must not be overlooked. To refer to the example, under the first method the volume of revenue of $200 and the amount of expense of $135 are not exhibited as such, while under the second plan both of these important factors are definitely isolated and clearly presented.

Simple Income Statement. In its most elementary form the income statement consists simply of the data of revenues and applicable costs arranged in such manner as to emphasize the net result, favorable or unfavorable. The degree of elaboration depends upon the nature of the business and the needs to be served. Where all revenues and expenses are brought together in an expense and revenue account the statement is essentially an arrangement of the data of such account, with appropriate captions and explanations. For A, the fruit vender, an income statement for the week for which the accounts are given above, including a showing of drawings and retained earnings, is as follows:

Sales		$200
Expenses:		
Merchandise Cost of Sales	$135	
Other Charges	(none)	135
Net Income		$ 65
A's Drawings		60
Earnings Retained in the Business		$ 5

In this case the net income is also the amount of proprietary earnings.

Illustration. The accounts of the Jacobs Co. at the opening of business on January 1, 1949, stand as shown below:

Debit Balances		*Credit Balances*	
Cash	$ 1,000	Accounts Payable	$10,000
Accounts Receivable	14,000	Payroll	300
Merchandise	20,000	Capital Stock	50,000
Supplies	200	Retained Earnings	9,700
Unexpired Insurance	300		
Land	9,500		
Building	20,000		
Store and Office Equipment	5,000		
	$70,000		$70,000

CASH

√	$ 1,000	(3)	$ 100
(6)	5,000	(4)	600
(7)	16,000	(8)	11,030
		(10)	750
		(11)	2,400
		(14)	375
		(16)	25
		√	6,720
	$22,000		$22,000
/	$ 6,720		

STORE AND OFFICE EQUIPMENT

√	$ 5,000	(17)	$ 50
		√	4,950
	$ 5,000		$ 5,000
√	$ 4,950		

ACCOUNTS PAYABLE

(8)	$11,030	√	$10,000
(14)	375	(1)	10,000
√	9,313	(2)	200
		(12)	500
		(13)	18
	$20,718		$20,718
		√	$ 9,313

ACCOUNTS RECEIVABLE

√	$14,000	(7)	$16,000
(5)	15,000	√	13,000
	$29,000		$29,000
√	$13,000		

PAYROLL

(11)	$ 2,400	√	$ 300
√	400	(9)	2,500
	$ 2,800		$ 2,800
		√	$ 400

MERCHANDISE

√	$20,000	(20)	$15,500
(1)	10,000	√	15,250
(10)	750		
	$30,750		$30,750
√	$15,250		

CAPITAL STOCK

		√	$50,000

SUPPLIES

√	$ 200	(19)	$ 250
(2)	200	√	150
	$ 400		$ 400
√	$ 150		

RETAINED EARNINGS

√	$10,692	√	$ 9,700
		(i)	992
	$10,692		$10,692
		√	$10,692

UNEXPIRED INSURANCE

√	$ 300	(18)	$ 15
(3)	100	√	385
	$ 400		$ 400
√	$ 385		

PROPERTY TAXES

(4)	$ 600	(4)	$ 100
		√	500
	$ 600		$ 600
√	$ 500		

LAND

√	$ 9,500		

SALES

(a)	$20,000	(5)	$15,000
		(6)	5,000
	$20,000		$20,000

BUILDING

√	$20,000	(15)	$ 50
		√	19,950
	$20,000		$20,000
√	$19,950		

SUPPLIES EXPENSE

(19)	$ 250	(e)	$ 250

SALESMEN'S SERVICES

(9)	$ 2,500	(c)	$ 2,500

MERCHANDISE COST OF SALES

(20)	$15,500	(b)	$15,500

DELIVERY CHARGES

(12)	$ 500	(d)	$ 500

TAX EXPENSE

(4)	$ 100	(g)	$ 100

MISCELLANEOUS EXPENSE

(13)	$ 18	(h)	$ 33
(18)	15		
	$ 33		$ 33

EXPENSE AND REVENUE

(b)	$15,500	(a)	$20,000
(c)	2,500		
(d)	500		
(e)	250		
(f)	125		
(g)	100		
(h)	33		
(i)	992		
	$20,000		$20,000

DEPRECIATION AND MAINTENANCE

(15)	$ 50	(f)	$ 125
(16)	25		
(17)	50		
	$ 125		$ 125

The following is a summary of business transactions and other operating data for January:

(1) Purchases of merchandise on account, $10,000.
(2) Purchases of supplies on account, $200.
(3) Insurance premiums paid in cash, $100.
(4) Property taxes paid, applicable to first half of 1949, $600.
(5) Sales of merchandise on account, $15,000.
(6) Cash sales, $5,000.
(7) Collections on account, $16,000.
(8) Payments on account, $11,030.
(9) Salesmen's services received, on credit basis, $2,500.
(10) Transportation charges on merchandise received, paid in cash, $750.
(11) Payments to salesmen, $2,400.
(12) Weekly bills received from Merchants' Delivery Co., $500.
(13) Bills received covering utility services for month ending January 20, $18; for convenience the entire amount is treated as applicable to January operations.
(14) Payments to Merchants' Delivery Co., $375.
(15) Estimated depreciation of building for January, $50.
(16) Maintenance costs, paid in cash, $25.
(17) Estimated depreciation of equipment, $50.
(18) Insurance applicable to January business, $15.
(19) Supplies on hand, January 31, $150.
(20) Merchandise cost of January sales, including transportation, $15,500.

Recorded in skeleton accounts, including entries to collect expenses and revenues in a summary account and to transfer the net income to retained earnings, these data appear as shown on pages 87–88.

With reference to titles employed and arrangement of entries numerous variations are possible. Such items as insurance expired, supplies consumed, and taxes applicable to January business, for example, might be charged directly to expense and revenue. The book entries necessary to summarize the expense and revenue data and determine the net balance may be made in any convenient order; here the charges are assembled according to size.

The balances of the accounts now stand as follows:

Debit Balances		*Credit Balances*	
Cash	$ 6,720	Accounts Payable	$ 9,313
Accounts Receivable	13,000	Payroll	400
Merchandise	15,250	Capital Stock	50,000
Supplies	150	Retained Earnings	10,692
Unexpired Insurance	385		
Property Taxes	500		
Land	9,500		
Building	19,950		
Store and Office Equipment	4,950		
	$70,405		$70,405

The position statement of the Company at this time, based upon the foregoing balances, would appear as follows:

JACOBS COMPANY
Position Statement
January 31, 1949

Assets			*Equities*		
Current:			**Current Liabilities:**		
Cash	$ 6,720		Accounts Payable	$ 9,313	
Accounts Receivable	13,000		Payroll	400	$ 9,713
Merchandise	15,250				
Supplies and Prepayments	1,035	$36,005	**Stockholders' Equity:**		
			Capital Stock	$50,000	
			Retained Earnings	10,692	60,692
Fixed:					
Land	$ 9,500				
Building	19,950				
Store and Office Equipment	4,950	34,400			
		$70,405			$70,405

The following is an arrangement of the data collected in the expense and revenue account, with a showing of retained earnings, in statement form:

JACOBS COMPANY
Income Statement
Month of January, 1949

Sales		$20,000
Expenses:		
Merchandise Cost of Sales	$15,500	
Salesmen's Services	2,500	
Delivery Charges	500	
Supplies Expense	250	
Depreciation and Maintenance	125	
Taxes	100	
Miscellaneous Expense	33	
		19,008
Net Income (also earnings of stockholders)		$ 992
Retained Earnings, January 1, 1949		9,700
Retained Earnings, January 31, 1949		$10,692

Questions

1. What are the principal difficulties involved in determining costs of revenue? Show that these difficulties are magnified if an attempt is made to measure the cost of the particular sale.

2. Illustrate the fact that the use of supplementary accounts in recording revenues and expenses requires fewer entries than would be needed if each sale were immediately resolved into the underlying statement elements.

3. Show that the indirect method of handling revenues and expenses emphasizes important managerial data.

4. What is the generally accepted test of revenue realization?

5. Define revenue in terms of quantitative changes in assets and equities. Precisely why are revenues recorded as credits?
6. Contrast revenue and net income. Revenue and cash receipts.
7. Give a precise, technical definition of net income.
8. Illustrate the use of the sales account.
9. Present a precise definition of expense. Why are expense items debits?
10. Discuss the need for a system of cost and expense accounts.
11. Describe the simple income statement.

VI

INCOME-STATEMENT ACCOUNTS—Continued

Expense and Current Costs Incurred. Expense has been defined as the cost of periodic revenue. It follows that the amount of expense is ordinarily quite distinct from the total of costs incurred for the period. Goods and services required in production do not, in general, constitute expense upon the instant of acquisition. It is only as these resources expire as a cost of product sold that the true expense stage is reached and the amounts involved may properly be charged to revenue. This is obvious in the case of fixed assets such as buildings and equipment; in principle it is no less true of current factors. Labor services, supplies, utility services and other current items—valuable considerations for which funds are voluntarily paid—are *costs incurred* but are not, immediately, *expense*.

It is true that acquisition and final expiration are virtually simultaneous in the case of some selling and delivery charges. Perhaps the best example is found in the case of costs incurred in transporting product to customers. Assume, for example, that the M Co. buys on account from the Central Railroad transportation services of this type to the amount of $100. This transaction would be recorded, if the item of services received is viewed as a cost incurred but not as a revenue charge, by a debit to an account with transportation services and a credit to the carrier's account. But since these services are immediately consumed as a cost of revenue it would be in order, as a further step, to transfer this cost to delivery expense. Evidently it is feasible, in such a case, to view acquisition and expiration as merely different phases of a single transaction and to treat the amount of the cost as an expense from the outset.

The practical importance of distinguishing sharply between pur-

chases of current commodities and services on the one hand and expense charges on the other varies not only with the type of cost but also with the type of enterprise under consideration. Especially where the process of production is long, as in many manufacturing lines, does the amount of the expense or revenue charge for the particular period differ markedly from the amount of cost incurred.

The length of the period of reckoning also has a bearing. Where financial reports are required for the month or quarter, for example, the total of costs incurred for the period is not likely to correspond at all closely to the amount of charges applicable to current sales.

Expense and Current Asset Accounts. The distinction between cost incurred and expense need not always be insisted upon as far as the definition of particular accounts is concerned. For practical purposes an account may be defined in terms of the character of the predominant element appearing therein, regularly, at the *end* of the accounting period. As has already been indicated, the changes in asset values brought about by the internal processes of production are not completely and continuously reported by the typical system of accounting. It follows that in practice many of the accounts of the enterprise will stand for a considerable time in a more or less "mixed" condition. That is, many of the accounts will not exhibit, continuously, a single clear-cut element. In some cases the amount appearing at the close of the period may be largely expense, and the accounts in question may accordingly be rated as expense accounts. In other instances the expense factor will be of relatively minor importance, and such accounts, therefore, may reasonably be defined as asset accounts. In analyzing and recording the particular transaction it is doubtless desirable that each element be interpreted in terms of its immediate character. The *purchase* of advertising supplies, for example, may well be viewed as the acquisition of a current asset, and the transaction recorded on this basis. The *account* with advertising supplies, on the other hand, may be treated as primarily an expense account. In the case of any such account periodic adjustment is of course necessary to separate the balance on hand from the amount expired.

Whether the cost of a current commodity or service be conceived originally as an addition to asset values or as a charge to expense is a matter of indifference as far as the *columnar distribution* is con-

cerned; whichever interpretation is made the result in every case will be a debit. It is vitally important, however, that at the close of each period asset values be carefully separated from expenses, for otherwise the net income figure will not be correctly determined.

Expense and Utilization. The incurring of cost, the acquisition of goods and services, is not a proper occasion for the recognition of expense charges, as has been explained. It must also be insisted that conversion or utilization is not a satisfactory test of expense. Costs become expense as they contribute to, or are assignable to, realized revenues. The fact that factory materials or supplies, for example, are taken from stores and used in operation does not demonstrate that the amount should be charged immediately to expense. Such costs, while no longer available in the original form, remain a part of total asset values until the product to which they have been devoted is disposed of. The same thing, strictly speaking, may be said of all the various types of goods and services utilized by the enterprise. As pointed out earlier, costs pass through three principal stages. The first stage is the incurring of cost; the second stage is the utilization of the cost factor in production; the third—at which time the values involved become expense—is final expiration in terms of the volume of revenue.

Where a particular good or service has no definite, observable relation to particular revenues—as is true, in general, of office supplies, accounting costs, administrative services, etc.—it is common practice to treat all utilized items as expense. Nevertheless there is a tendency, under modern cost methods, in the direction of more satisfactory bases for assigning costs to revenues than mere utilization, and additional progress along this line is to be expected.

In some cases utilization is simultaneous with final expiration. Shipping supplies, for example, which are used on the occasion of consignment or delivery to the customer (which is also the typical occasion for the recognition of revenue), are chargeable to expense substantially as utilized.

Expense and Expenditure. Mention should be made of the familiar but mistaken impression that expense or periodic cost of sales is measured by or closely related to expenditure in the sense of periodic cash outlay. For most enterprises such a conception of expense is entirely unreasonable, especially in these days of extensive credit

relationships. The amount of expense in the typical case is not likely to be approximated by either total expenditures or outlays for current commodities and services. It is true that in a very simple retail enterprise the difference between the amount of current payments for goods, labor, insurance, advertising, etc., and the amount of all costs which may reasonably be assigned to sales for the period, may not be great. Nevertheless the distinction is fundamental in principle and especially in cases where depreciation is an important factor, or where inventories are subject to marked fluctuation from period to period, there is no reason for expecting an arithmetical correspondence between true expense and cash expenditure. These data would coincide in amount, in fact, only where no fixed assets were required, and where all current items were acquired, paid for, utilized, and finally consumed as costs of revenue in each period, and in addition it would be necessary to exclude all cash withdrawals by the proprietor or other disbursements not related to cost of operation. It should be fairly evident that such a situation is almost never found in business practice.

Expense and Revenue in Trading. In the trading field, where the essential activity is selling and there is little or no fabrication, the difference between the amount of labor and other current services purchased during a year, for example, and the corresponding expenses or costs of sales for the same period, is often not large, and the merchant, therefore, is inclined to view all such costs incurred as expenses. Nevertheless there is some objection to this interpretation. All transportation charges on merchandise purchased, obviously, should be included in (or viewed as a part of) the cost of merchandise, and there is much to be said in favor of a like treatment of the costs of unpacking, marking, shelving, and similar factors, together with insurance and storage charges. The effect upon yearly income of thus accumulating costs, it is true, is not likely to be marked unless the inventory, or amount of goods on hand at the close of the period, is a relatively large and—from period to period—variable figure. On the other hand, where the accounting period employed is the month or other comparatively short interval, the financial statements prepared may be seriously inaccurate unless considerable care is taken in distinguishing the amount of current commodities and services acquired from the cost of sales or expense. Suppose, for example, that a merchant in the month of November is stocking goods in prepara-

tion for the holiday season. If in this situation all costs of transportation, handling, storing, etc. are charged to November revenue it is apparent that the operations for the month will not be correctly reported.

Sound accounting in the trading field along the lines suggested need not require an elaborate system of charging all storing and handling costs incurred, item by item, first to merchandise in the storeroom, then to merchandise on the shelves, and, finally, to cost of merchandise sold. With respect to direct transportation charges there is much to be said for their inclusion in the cost of merchandise as such. In the case of most of the storing and handling costs, however, all that is required is an adjustment at the close of the period, based on the most accurate estimates available, which places the inventory accounts on the one hand and the cost of sales on the other on a sound basis. The direct selling charges, of course, can be treated as expenses without reference to the inventories.

In the trading field the term "cost of sales" is often restricted to the cost of merchandise sold, with transportation costs and other direct handling charges included in some cases. The term "expense" is then applied to all other operating costs. There is no serious objection to this usage, except perhaps in the undue emphasis upon the "gross profit" figure—the excess of sales over merchandise cost of sales—which tends to result.

In the large trading establishment a more or less elaborate classification of revenue accounts by departments or classes of sales may be used to advantage. Similarly, the needs of the management often require an extensive system of expense accounts.

Expense and Revenue in Manufacturing. In the typical manufacturing enterprise the process of fabrication is sufficiently long and important to require recognition in the accounts. In such an enterprise the values of labor and materials used in production usually pass through at least four fairly distinct events or stages: (1) acquisition; (2) utilization or conversion; (3) completion; (4) sale. These stages are most clearly evidenced in the history of raw materials. Materials are purchased and received; materials are requisitioned from stores and put in process; materials, in conjunction with other factors, are transferred to the stock or shipping room as goods are completed; material costs become a part of cost of sales as units of product are consigned to customers.

The ideal accounting for expense and revenue in this field may be made clear through the use of a simple example. Suppose that the position of the R Co., ready to begin business, stands as follows:

Assets		*Equities*	
Cash	$10,000	Accounts Payable	$ 5,000
Materials	10,000	Capital Stock	35,000
Equipment	20,000		
	$40,000		$40,000

The following is a summary of the first year's operations: (1) materials purchased on account, $15,000; (2) labor services secured on a credit basis, $25,000; (3) all other manufacturing costs incurred, on a cash basis, $10,000; (4) estimated value of equipment consumed in production, $1,000; (5) materials requisitioned and placed in operation, $20,000; (6) labor services and all other manufacturing costs incurred are utilized; (7) finished stock completed has a total cost value of $50,000; (8) total cost of all goods sold and delivered, $40,000; (9) sales, all for cash, $50,000; (10) payments on account for materials, $14,000; (11) payments to employees on account, $24,000; (12) selling and shipping expenses incurred (not considered to be assignable to manufacturing activities as such), for cash, $5,000.

Setting up these operating data in skeleton accounts, with original balances incorporated, results as shown on this and next page. The entries necessary to transfer the figures for sales, factory cost of sales, and selling and shipping expense to the operating summary, and to close the net income to retained earnings, are indicated by the use of letters rather than numbers.

In the illustration the difference between expenses and revenues, $5,000, is treated as net earnings. This assumes that there are no other charges to be recognized, and that no dividends to stockholders have been declared. The amount of net income under such con-

CASH

√	$10,000	(3)	$10,000
(9)	50,000	(10)	14,000
		(11)	24,000
		(12)	5,000
		√	7,000
	$60,000		$60,000
√	$ 7,000		

ACCOUNTS PAYABLE

(10)	$14,000	√	$ 5,000
√	6,000	(1)	15,000
	$20,000		$20,000
		√	$ 6,000

MATERIALS

√	$10,000	(5)	$20,000
(1)	15,000	√	5,000
	$25,000		$25,000
√	$ 5,000		

CAPITAL STOCK

		√	$35,000

RETAINED EARNINGS

		(d)	$ 5,000

EQUIPMENT

√	$20,000	(4)	$ 1,000
		√	19,000
	$20,000		$20,000
√	$19,000		

PAYROLLS

(11)	$24,000	(2)	$25,000
√	1,000		
	$25,000		$25,000
		√	$ 1,000

LABOR COST

(2)	$25,000	(6)	$25,000

SALES

(a)	$50,000	(9)	$50,000

OTHER MANUFACTURING COSTS

(3)	$10,000	(6)	$10,000

FACTORY COST OF SALES

(8)	$40,000	(b)	$40,000

WORK IN PROCESS

(4)	$ 1,000	(7)	$50,000
(5)	20,000	√	6,000
(6)	35,000		
	$56,000		$56,000
√	$ 6,000		

SELLING AND SHIPPING EXPENSE

(12)	$ 5,000	(c)	$ 5,000

FINISHED STOCK

(7)	$50,000	(8)	$40,000
		√	10,000
	$50,000		$50,000
√	$10,000		

EXPENSE AND REVENUE

(b)	$40,000	(a)	$50,000
(c)	5,000		
(d)	5,000		
	$50,000		$50,000

ditions constitutes an increase in the stockholders' equity, but under the corporate form of organization such increase is segregated as retained earnings instead of being treated as a direct adjustment of capital stock.

The independence of the four stages of cost may be emphasized by listing the respective amounts involved in this illustration, exclusive of selling and shipping costs, as follows:

1. Costs incurred (including materials and equipment on hand at beginning of year)	$80,000
2. Amount utilized in production	56,000
3. Cost of product completed	50,000
4. Cost of finished product sold	40,000

It is not always feasible to account for the various cost factors and stages as precisely as is done in this highly artificial case. It requires a great deal of clerical effort to trace the course of labor and material costs, and ascertaining and allocating the indirect costs such as depreciation and maintenance is a difficult task. Under modern cost systems, nevertheless, the effects of internal operation are recognized in the accounts and the determination of cost of sales follows the general lines indicated here. The procedure outlined, it should be added, is based upon the assumption that cost is the proper basis for valuation throughout the entire process of production. If inventories of materials and other factors are based upon values other than costs, the resulting net income figure includes the effects of special elements of loss or gain.

Taxes. Taxes are a somewhat anomalous element in business finance. Taxes are coerced; their amount is largely outside the control of management; they do not follow price trends closely; they can hardly be said to measure the value of services received and utilized in production. Taxes, therefore, are not strictly congruous with ordinary expenses. However, taxes are clearly a deduction from or charge against revenues in the process of determining net income.

In accounting practice property taxes, social security ("payroll") taxes, excise duties, and various other types of levies are ordinarily treated as expenses and in some cases are included in the assigned cost of production, thus finding their way into inventories of work in process and finished goods. On the other hand so-called income or profit taxes—in recent years a major charge in many enterprises—are commonly viewed as a distinct deduction from periodic revenue, not

subject to departmental classification or inclusion in inventoriable cost compilations. For the sake of emphasizing the total tax burden there is something to be said for the showing of all tax charges—of every type—under a separate heading in the income statement.

Where a tax is so levied that the enterprise is merely acting as the agent of the government in making collection the amount of the tax money received should be credited directly to government account rather than to sales. In general, however, taxes on sales or other measure of the volume of business are legally construed as levies on the enterprise rather than on the customer.

In some jurisdictions the period to which an assessment on real property applies extends for some months beyond the date of payment. In such situations the amount of the prepayment may be viewed as an asset—an asset which is absorbed in expense as the period covered elapses. An asset also arises where the payment to the government results in the acquisition of a stock of stamps or tokens. In this type of case the charge to revenue properly occurs in the period in which the sale of the stamped article is made.

Losses. From a strictly technical point of view a loss may be defined as *any deduction from revenue (or from retained earnings or capital) resulting from the expiration of some asset value for which no compensatory value is acquired.* Thus loss may be contrasted with expense. Expense is the cost of revenue; it measures the consumption of resources which is made good (at least in part) from the proceeds of sales. A loss measures an expiration for which there is no return.

An embezzlement by a trusted employee—unless recoverable from a surety company or otherwise—is an example of a situation which gives rise to a loss. Extraordinary damage to buildings, equipment, and other assets as a result of storms, fires, accident, etc., and not fully covered by insurance, represents loss. Shrinkage in the market value of securities, and decline in value of inventories either as a result of damage and like factors or of falling prices, may be said to constitute losses, although in the absence of realization by sale such losses are not always given explicit recognition in the accounts.

A word of caution is needed. The operation of a business inevitably carries with it serious risks; the process of production as such is more or less inextricably bound up with the stream of business hazards. It follows that in most cases no complete and precise isola-

tion of loss elements—as distinct from ordinary operating charges—can be worked out in the accounts. The nature of a loss, in principle, is quite clear, but it is by no means always easy, in practice, to distinguish between loss and expense. What, then, constitutes sound accounting policy? Where it is feasible to do so true losses should be segregated and excluded from operating charges; where there is any doubt it is advisable to treat the questionable item as an expense, appropriately labeled. In no case should losses be "covered up," either through combination with other elements or through complete exclusion from the income report. The most practicable procedure, as a rule, is to show specific losses first in special accounts and to close these accounts to the operating summary, expense and revenue, at the end of the period. Where a loss is of major amount, and is clearly applicable to preceding accounting periods, deduction directly from retained earnings is not objectionable provided there is full disclosure in the income statement.

Where all charges for the particular period, including specific losses, exceed the total of revenues for the period a net loss emerges. Such a loss falls first upon the residual interest, the equity of the stockholders or proprietors.

Special Revenues. Many enterprises realize special or incidental incomes, regularly or irregularly, in addition to the main stream of revenue represented by the sale of product. Common examples are rent, royalties, and interest or dividends accruing on investments. Likewise revenue may arise through the sale of investments or other assets. Supplementary revenue accounts are needed to record all such items. For example, on January 1, 1949, the accounts of the M Co. show notes receivable in the principal amount of $50,000 and interest accrued thereon of $1,000. During 1949 interest is received on these notes in the amount of $1,500 on March 1 and $1,500 on September 1, and on December 31 the interest accrued receivable is again $1,000. In this situation interest receivable and interest revenue are recorded in skeleton account form as follows:

INTEREST ACCRUED RECEIVABLE

✓	1,000	(1)	$ 1,000
(3)	1,000		

INTEREST REVENUE

		(1)	$ 500
		(2)	1,500
		(3)	1,000

Under this procedure the interest collected on March 1 is credited to interest receivable to the extent of the amount previously accrued in this account and the balance is credited to interest revenue. The amount collected on September 1, which is entirely earned in 1949, is credited in full to revenue. (The debit in each case, of course, is to cash.) At the end of the year the amount accrued at that date is debited to interest receivable and credited to interest revenue. The total interest revenue earned during the year, $3,000, is shown by the special revenue account. This procedure is convenient and yields accurate results provided the amount accrued at the end of the period is correctly computed and recorded. Under a more complete treatment all interest receivable is regularly accrued as an asset (this is done daily by some financial institutions), with corresponding credits to revenue, and all interest receipts are recorded in full as collections of receivables.

In some cases certain expenses and taxes may be specifically assignable to the supplementary revenues and even where no assignment of charges is feasible it may generally be assumed that an indeterminate portion of the total is applicable to such revenues.

Where revenue arises through the sale of a particular asset (other than product) it is common practice to credit revenue with only the excess of the proceeds over the cost (or other book value) of the asset sold. For example, the M Co. sells a piece of land that cost $6,000—and is carried in the accounts at that amount—for $10,000, cash. Ignoring the matter of brokerage or other charges which may be associated with the sale, this transaction would be recorded by a debit to cash of $10,000, a credit to land account of $6,000, and a credit to a special revenue account of $4,000.

Interest Charges. The location of interest charges on borrowed capital in the system of accounts and in the income report is a somewhat controversial question. From the standpoint of the proprietary equity interest is a deduction closely analogous to operating expense. From the point of view of the enterprise as an operating entity, on the other hand, it is more reasonable to treat interest charges as a contractual distribution of net income.

In the unincorporated field, and especially in those cases in which a large part of all funds involved is contributed by the proprietors, it is quite reasonable to couch the conception of net income pri-

marily in terms of the proprietary equity. If the claims of the creditors are relatively small in amount it is evident that accruals of income in their favor will not be large, and that such accruals may, without serious distortion, be treated as deductions from revenue congruous with expense charges. Further, the liabilities in the single-proprietorship or partnership are usually current in nature and do not represent long-term commitments of capital to the enterprise. There is the additional point that from the legal angle the equities of creditors in the unincorporated business are construed as the debts of the owners, rather than as investments in the enterprise as an entity.

In the case of the corporation, on the other hand, and particularly in those companies with a complex capital structure, net income should be defined from the standpoint of all contributors of capital as a group—including noteholders and bondholders as well as all classes of stockholders. In other words, operating expense should be restricted to the expired values of goods and services acquired by the enterprise with the joint funds, however obtained, and all distributions to those furnishing capital, whether labeled as interest or dividends, should be treated as appropriations of net income (assuming that income is available in sufficient amount to cover such appropriations). This conception of income is required for the typical corporation if the managerial point of view is to receive proper emphasis. The management naturally looks upon the business enterprise under its control as an operating and financial unit, regardless of the sources of capital employed, and from this standpoint it is hardly reasonable to treat interest on bonds or any other contractual or preferred income charge as an expense similar to the cost of labor and materials. To the manager the amount of operating expense does not vary with the type of capitalization employed. Especially is it important to avoid including bond interest or similar charges in expense in comparing the operating records of companies having different capital structures or in comparing the records of various periods for a single company whose capitalization has been undergoing important changes with respect to the relative amounts of borrowed and proprietary capital.

The importance of the managerial aspect of present-day business operation, coupled with the fact that the large corporation is the dominant form of enterprise, justify the adoption of the view that

interest charges accruing on notes, bonds, and other forms of contractual equities are a deduction from net income rather than an expense. Such a treatment of interest charges is particularly satisfactory in that it avoids the objections to the alternative procedure and at the same time permits the calculation of the net earnings (or loss) accruing to the stockholders or proprietors and the presentation of such net figure with any degree of emphasis desired.

Interest Charges Illustrated. On January 1, 1949, the M Co. has outstanding mortgage bonds in the face amount of $100,000. Interest at the rate of 4% per annum is payable April 1 and October 1. Assuming that the interest charge is accrued in full just before each payment, as well as at the end of the year, the entries recording the amount accrued on January 1 and the accruals and payments during the year would be as follows:

INTEREST CHARGES		INTEREST ACCRUED PAYABLE	
(1) $1,000		(2) $2,000	✓ $1,000
(3) 2,000		(4) 2,000	(1) 1,000
(5) 1,000			(3) 2,000
			(5) 1,000

Entries numbered (1), (3), and (5) represent the recording of the accrued interest on March 31, September 30, and December 31. Entries (2) and (4) represent the charges to the liability account on April 1 and October 1 and are of course matched by credits to cash.

Dividends. The term *dividends* is usually restricted to the amounts appropriated and paid to corporate stockholders out of earnings. Dividends must accordingly be charged to net income or retained earnings rather than to revenue. The usual procedure is to set up a liability account for the amount of the dividend as appropriated by the board of directors, the concurrent debit being either to retained earnings or to current income (or, first, to a special dividend account). Later, when the checks are issued, the liability account is charged and the cash account is credited. Where there are two or more types of stock outstanding, each with its own special income rights, separate dividends accounts are required for each issue. In addition it is necessary to maintain subsidiary records showing the status of each

stockholder with respect to the appropriation and payment of dividends.

Many corporations treat dividends as appropriated from total retained earnings account rather than from current income. In the case of regular dividends, however, showing the amount as a charge to current earnings for the period in the income report is desirable in that it focuses attention upon the relation of such earnings to the dividend program.

The apportionment and withdrawal of the distributive shares of partnership earnings should likewise be recorded in special accounts, one for each partner.

Income Summary. Particularly in corporate accounting a summarizing account is desirable to which is closed the amount of net income (or loss) and to which is charged the distributions of income in the form of interest and dividends. In special cases specific losses, which have no relation to operation in the usual sense, may be charged to this account.

To illustrate the use of this account, assume that the expense and revenue account of the M Co. shows an excess of credits over debits, after all charges including taxes and ordinary losses have been included, of $50,000. Assume, further, that the account with interest charges shows debits of $4,000 and the account with dividend charges shows a debit total of $6,000. In this situation expense and revenue would be closed by a debit to that account and a credit to income account of $50,000, and the interest and dividend accounts would be credited with $4,000 and $6,000 respectively, and the same amounts would be debited to income. The income summary would then be closed by a debit of $40,000 and a corresponding credit to retained earnings.

Retained Earnings. This element of the stock equity—often labeled "earned surplus" in corporate accounting—represents the amount of income to stockholders accumulated for use in the business. Although legally available for dividend appropriations it usually has the significance of additional capital employed—capital arising from foregone dividends rather than actual investment. In the unincorporated field proprietary earnings usually are drawn, are added directly to the capital account or accounts, or are carried in one or more current proprietary accounts.

Technically the amount of retained earnings is a credit, a positive equity element, and any account in which all or a part of such earnings is recorded must accordingly be viewed as an equity account. This requires emphasis in view of the common tendency to confuse retained earnings with particular asset values, notably cash. Like other equities, retained income does not indicate individual resources, but expresses, from the standpoint of ownership, a cross section of the *total* of the assets.

The opposite of retained earnings, *deficit*, may be recorded in a special account. Such an account represents the amount by which capital equities have been diminished as a result of net losses.

Retained earnings are frequently appropriated or segregated under special titles such as "reserve for additions and betterments," and "reserve for contingencies." All such accounts are merely sections of earnings which have been "earmarked" to indicate particular policies and intentions on the part of the board of directors, or to fulfill the provisions of some contract which requires the accumulation of earnings. In each case the amount involved is a credit balance, a part of the proprietary equity.

In banking the "surplus" account is employed to show that portion of accumulated earnings which has been definitely and permanently committed to the enterprise (as well as capital in excess of par value of stock issued), and "undivided profits" is the caption used to show the unappropriated portion of retained income.

Income Statement. The income statement is a systematic arrangement of the data of revenues, expenses and other revenue deductions, net income, income deductions and distributions, and the balance added to retained earnings.

For illustrative purposes assume that the income-statement data of the M Co. for the calendar year 1949 are as follows: (1) sales of finished product (delivered to customers), $300,000; (2) interest earned on government bonds owned, $1,000; (3) dividends earned on corporate stocks owned, $2,000; (4) manufacturing cost of sales, $200,000; (5) general administration expense, $30,000; (6) selling and delivery expense, $25,000; (7) loss on sale of securities, $5,000; (8) estimated income taxes for 1949, $20,000; (9) interest accrued on notes and bonds, $5,000; (10) dividends declared on outstanding capital stock, $10,000; (11) additional income tax assessment applicable to

year 1946, \$5,000; (12) retained earnings balance January 1, 1949, \$50,000. Following is an arrangement of these data in statement form:

M COMPANY
Income Statement
Year Ended December 31, 1949

Revenue:			
Sales of Completed Product		\$300,000	
Interest and Dividends Earned		3,000	\$303,000
Revenue Deductions:			
Expenses:			
Manufacturing Cost of Sales	\$200,000		
General Administration Expense	30,000		
Selling and Delivery Expense	25,000	\$255,000	
Losses:			
Loss on Sale of Securities		5,000	
Taxes for 1949 (estimated)		20,000	280,000
Net Income			\$23,000
Interest Accrued on Notes and Bonds			5,000
Earnings of Stockholders			\$ 18,000
Dividends Declared in 1949			10,000
Earnings Retained in Business			\$ 8,000
Retained Earnings, January 1, 1949		\$ 50,000	
Income Taxes for Prior Years (additional assessment for 1946)		5,000	45,000
Retained Earnings, December 31, 1949 (see position statement)			\$ 53,000

The income statement can be shown in more detail than indicated above, particularly with respect to revenues and expenses. However, it is not advisable, in the general income statement covering all operations for the year, to attempt to exhibit detailed classifications of revenue or expense or departmental operating balances; if the reader is to get a clear picture of the main factors involved the data should be presented in reasonably condensed form. Where greater detail is desired by operating officials or other interested parties use should be made of supplementary schedules and compilations.

In the statement shown above expenses are presented in broad functional divisions and there is no segregation of charges in terms of original descriptions such as materials, labor, and depreciation. For some purposes, no doubt, a more illuminating statement is one which emphasizes classification by objects of expenditure. For example, assume that the revenue deductions shown in the above statement may be broken down as follows:

Materials and Supplies	$100,000
Wages and Salaries	125,000
Utility Services, Insurance, and Other Services Furnished by Outsiders	10,000
Depreciation of Buildings and Equipment	10,000
Loss on Sales of Securities	5,000
Property, Social Security, and Miscellaneous Taxes	10,000
Income Taxes	20,000
	$280,000

This classification might be substituted for the other, or presented as a supplementary schedule. It is noticeable that a considerable number of corporations find it desirable to emphasize classification in kind, as opposed to functional and departmental groupings, in their published reports.

In recent years increasing stress has been laid upon the measurement of periodic income as the primary objective of accounting, and that has resulted in increasing attention being given to the income statement in financial reporting. It is now generally agreed that this statement is at least on a level with the statement of financial position in practical importance.

Illustrative Problem. A comprehensive problem is given at this point for the purpose of emphasizing the discussion of income-statement accounts in this and the preceding chapter.

Data

The Dill Lumber Co. begins business as of January 1, 1949, with the following status:

Assets		*Equities*	
Cash	$ 500	Cal Sawmills, Inc	$ 5,000
Exchange Bank	10,000	Notes Payable	15,000
Merchandise	20,000	Capital Stock	40,000
Insurance Prepaid	500		
Land	10,000		
Buildings	15,000		
Equipment	4,000		
	$60,000		$60,000

The following tabulation summarizes the transactions and operations for the year 1949:

(1) Purchases of lumber from Cal Sawmills, Inc., on account, $60,000.
(2) Transportation charges on purchases, paid by check, $2,500.
(3) Sales of lumber to various customers, on account, $65,000.
(4) Sales of millwork to various customers, on account, $10,000.
(5) Collections from customers, cash, $72,000.
(6) Amount of cash received from customers deposited in bank, $71,500.
(7) Payments to Cal Sawmills, Inc., by check, $65,000.

(8) Cost of lumber taken from stock in making up millwork, $5,000.
(9) Supplies purchased for cash, $1,000, distributed as follows: office, $400; mill, $300; delivery, $300.
(10) Cost of labor services acquired on account, $10,000, as follows: yard, $3,000; mill, $2,000; office, $2,000; delivery, $3,000.
(11) Equipment purchased (on July 1), by check, $3,000.
(12) Payments to employees, by check, $9,500.
(13) Interest paid, by check, $450; all of the notes carry an annual rate of 6%.
(14) Advertising for year, paid by check, $500.
(15) Checks cashed to replenish cash in office, $850.
(16) Miscellaneous charges paid in cash, $350, are applicable as follows: yard, $50; mill, $100; office, $100; delivery, $100.
(17) Depreciation of buildings for year totals $750, chargeable as follows: yard, $450; mill, $150; office, $150.
(18) Depreciation of equipment, at rate of 10% of cost per annum, is chargeable as follows: mill, 40%; office, 20% delivery, 40%.
(19) Additional stock issued for cash, $10,000.
(20) Proceeds of issue of stock are deposited.
(21) Taxes, paid by check, $1,500.
(22) Insurance premiums, paid by check, $500.
(23) Insurance expired for year, $600, is applicable 40% to yard, 25% to mill, 10% to office, and 25% to delivery.
(24) Cost of lumber on hand, December 31, 1949, $23,500.
(25) Cost of millwork on hand and still in process, December 31, 1949, $500.
(26) Office supplies on hand, December 31, 1949, $100.
(27) All costs of operating yard, mill, office, and delivery activities are assignable to the year's revenues except to the extent of millwork on hand and office supplies, as indicated above.

Directions

(*a*) Open skeleton accounts and record the foregoing data; include all entries necessary to summarize and reduce the income-statement data to their lowest terms. Use in addition to the account titles given in the statement above, *only* the following: Accounts Receivable; Lumber Sales; Mill Sales; Mill Costs; Office Costs; Selling and Delivery Costs; Yard Costs; Payroll; Interest Charges; Interest Accrued Payable; Taxes; Lumber Cost of Lumber Sales; Mill Cost of Mill Sales; Expense and Revenue; Income; Retained Earnings.

(*b*) Prepare an income statement for the year.

Solution

DILL LUMBER COMPANY
Skeleton Accounts for Year 1949

CASH

√	$ 500	(6)	$71,500
(5)	72,000	(9)	1,000
(15)	850	(16)	350
(19)	10,000	(20)	10,000
		√	500
	$83,350		$83,350
√	$ 500		

EQUIPMENT

√	$ 4,000	(18)	550
(11)	3,000	√	6,450
	$ 7,000		$ 7,000
√	$ 6,450		

CAL SAWMILLS, INC.

(7)	$65,000	√	$ 5,000
		(1)	60,000
	$65,000		$65,000

EXCHANGE BANK

✓	$10,000	(2)	$ 2,500
(6)	71,500	(7)	65,000
(20)	10,000	(11)	3,000
		(12)	9,500
		(13)	450
		(14)	500
		(15)	850
		(21)	1,500
		(22)	500
		✓	7,700
	$91,500		$91,500
✓	$ 7,700		

MERCHANDISE

✓	$20,000	(8)	$ 5,000
(1)	60,000	(24)	54,000
(2)	2,500	✓	23,500
	$82,500		$82,500
✓	$23,500		

INSURANCE PREPAID

✓	$ 500	(23)	$ 600
(22)	500	✓	400
	$ 1,000		$ 1,000
✓	$ 400		

LAND

✓	$10,000		

BUILDINGS

✓	$15,000	(17)	$ 750
		✓	14,250
	$15,000		$15,000
✓	$14,250		

OFFICE COSTS

(9)	$ 400	(26)	$ 2,720
(10)	2,000	✓	100
(16)	100		
(17)	150		
(18)	110		
(23)	60		
	$ 2,820		$ 2,820
✓	$ 100		

NOTES PAYABLE

		✓	$15,000

CAPITAL STOCK

✓	$50,000	✓	$40,000
		(19)	10,000
	$50,000		$50,000
		✓	$50,000

ACCOUNTS RECEIVABLE

(3)	$65,000	(5)	$72,000
(4)	10,000	✓	3,000
	$75,000		$75,000
✓	$ 3,000		

LUMBER SALES

(a)	$65,000	(3)	$65,000

MILL SALES

(b)	$10,000	(4)	$10,000

MILL COSTS

(8)	$ 5,000	(25)	$ 7,420
(9)	300	✓	500
(10)	2,000		
(16)	100		
(17)	150		
(18)	220		
(23)	150		
	$ 7,920		$ 7,920
✓	$ 500		

INTEREST ACCRUED PAYABLE

(13)	$ 450	(13)	$ 900
✓	450		
	$ 900		$ 900
		✓	$ 450

TAXES

(21)	$ 1,500	(e)	$ 1,500

SELLING AND DELIVERY COSTS

(9)	$ 300	(27)	$ 4,270
(10)	3,000		
(14)	500		
(16)	100		
(18)	220		
(23)	150		
	$ 4,270		$ 4,270

LUMBER COST OF LUMBER SALES

(24)	$54,000	(c)	$54,000

MILL COST OF MILL SALES

(25)	$ 7,420	(d)	$ 7,420

YARD COSTS

(10)	$ 3,000	(27)	$ 3,740
(16)	50		
(17)	450		
(23)	240		
	$ 3,740		$ 3,740

EXPENSE AND REVENUE

(26)	$ 2,720	(a)	$65,000
(27)	4,270	(b)	10,000
(27)	3,740		
(c)	54,000		
(d)	7,420		
(e)	1,500		
(f)	1,350		
	$75,000		$75,000

PAYROLL

(12)	$ 9,500	(10)	$10,000
√	500		
	$10,000		$10,000
		√	$ 500

INCOME

(g)	$ 900	(f)	$ 1,350
(h)	450		
	$ 1,350		$ 1,350

INTEREST CHARGES

(13)	$ 900	(g)	$ 900

RETAINED EARNINGS

		(h)	$ 450

DILL LUMBER COMPANY

Income Statement

Year Ended December 31, 1949

Sales of Lumber (1)	$65,000	
Sales of Millwork (2)	10,000	$75,000
Expenses and Taxes:		
Lumber Cost of Lumber Sales (1)	$54,000	
Mill Cost of Mill Sales (2)	7,420	
Yard Costs	3,740	
Office Costs	2,720	
Delivery Costs	4,270	
Taxes	1,500	73,650
Net Income		$ 1,350
Interest Charges		900
Earnings of Stockholders		$ 450

(1)

Sales of Lumber	$65,000	100%
Lumber Cost of Lumber Sales	54,000	83%
Department Margin	$11,000	17%

(2)

Sales of Millwork	$10,000	100%
Mill Cost of Mill Sales	7,420	74%
Department Margin	$ 2,580	26%

An alternative classification of charges for income-statement purposes, useful to stockholders and others who may not be particularly interested in functional groupings, is as follows:

Expenses and Taxes:		
Materials and Supplies	$59,900	
Employees' Services	10,000	
Other Services (advertising, insurance, miscellaneous)	1,450	
Use of Buildings and Equipment (depreciation)	1,300	$72,650
Less Cost of Millwork on Hand		500
		$72,150
Taxes		1,500
		$73,650

Such arrangement is sometimes referred to as classification "in kind" or by "natural" divisions. By breaking down the inventory of millwork it would be possible to dispose of this balance by reducing each of the cost groupings appropriately. It should be noted that if there were an inventory of millwork at the beginning of the period the amount to be subtracted from (or added to) costs incurred would be the increase (or decrease) in such inventory.

Comments

This exercise involves classification of charges in terms of phases of operating activity and some segregation of costs applicable to the two classes of sales. The scheme of accounts used requires assignment of the cost of supplies upon acquisition; it would be a possible procedure (better, in some situations) to charge a general supplies account and distribute the cost as supplies are utilized. The inventory of supplies is allowed to stand under "Office Costs." Since no special account therefor is included in the scheme depreciation charges are distributed as accrued.

The assumption that all costs of operating yard, mill, office, and delivery activities are assignable in total to current revenues is subject to objection to the extent that any of these costs have a reasonable relationship to lumber still on hand.

In the solution given the total amount of interest on notes for the year is passed through the interest liability account. In view of the data it would be equally proper to credit the bank account directly for the portion paid, restricting the liability recognized to the amount accrued and unpaid. In the case of advertising and taxes the alternative treatment is followed; that is, the charges are made on a cash

basis, with no recognition of liability incurred and paid. It should be remembered that the entries given in most cases represent a summary of specific charges and credits made throughout the year.

"Mill Costs" is a type of work-in-process account and it is appropriate to retain the inventory of unfinished work under this head.

The supplementary schedules attached to the income statement are designed to disclose, for what they may be worth to the management, the balances from the two classes of sales after deduction of the definitely assigned charges. These balances or "margins" represent the amounts contributed by the two classes of sales to cover the unassigned costs, taxes, interest, and earnings. It is to be noted in the case of mill sales that supplies, labor costs, depreciation, insurance, and "miscellaneous charges," as well as lumber cost, are included in "Mill Cost of Mill Sales," whereas in the case of lumber sales only the lumber cost, with transportation added, is deducted. This illustrates the danger of misinterpretation of intermediate departmental balances, however carefully compiled. The two margins, and their corresponding percentages, are not directly comparable. The "contribution" of lumber sales, $11,000, is subject to a major portion of yard, office, selling and delivery charges, taxes, and interest. In the case of mill sales, on the other hand, there is a 26% margin, after the inclusion, apparently, of a major portion of all applicable costs other than taxes. In other words the mill department, for the year covered, seems to be much more "profitable" than the retail lumber department. The business as a whole, it may be added, has not done well for the year, as the amount earned on the stock equity is only a little over 1% of the amount of this equity as it stood at the beginning of the year.

Questions

1. Contrast expense and cost incurred. Illustrate the overlapping of expense and current cost accounts.

2. With an illustration contrast expense and converted or utilized cost. Expense and expenditure.

3. How must such costs as transportation and storing be handled in the trading field if proper monthly statements of operations are to be prepared?

4. What are the four stages of cost in manufacturing? Illustrate.

5. Why are tax charges an anomalous element in the accounting structure?

6. Define and illustrate *loss*. What is the distinction between a loss and an expense charge? Show that the distinction is not always easily drawn.

7. Give examples of "special" revenues.

8. What are the two alternative treatments of interest charges? Which is in general to be preferred, and why?

9. How are dividend appropriations and payments recorded?

10. Explain the use of an income summary account.

11. Define *retained earnings*. Define *deficit*.

12. From whose point of view should net income be defined in the case of the single-proprietorship or partnership? The corporation whose funds are largely secured through the issue of a single type of stock? The public-utility company in whose capital structure are one or more classes of preference stocks and several types of bonds?

13. What is the income statement and what is its purpose? Why is it desirable that adjustments of retained earnings be treated as a part of the general income report? What bearing do the questions asked under 12, above, have upon the arrangement of the income statement?

VII

PRIMARY BOOKS AND PROCEDURES

Underlying Documents. In preceding pages the accounting process has been outlined in terms of skeleton accounts and fundamental reports. The next step is an examination of the general features of the technical procedure actually employed in recording business transactions, with special reference to the "books" which serve as the backbone for such procedure. In this connection brief consideration should first be given to the underlying forms and documents which constitute the bookkeeper's raw material.

The use of original records or papers grows out of the complex nature of business transactions and the need for control and verification. Many transactions require considerable time for completion, involve numerous details, and give rise to important credit relationships. The typical purchase, for example, comprises the processes of ordering, receiving, auditing, and paying, and covers a period of from several days to a month or even more. The adequate description of such a transaction includes an itemized statement of goods in terms of kind, quantity, and price, the names of all parties involved, the terms of settlement, all significant dates, and many minor details such as method of shipment, lot and car numbers, order and invoice numbers, etc. Under these circumstances a bare summary of financial elements in dollars and cents, such as is afforded by the accounts proper, is insufficient. To insure systematic procedure and sound administrative control, together with the observance of all essential conditions, appropriate forms and records must be prepared and used at various stages of all such transactions.

The underlying documents comprise a great variety of forms, sheets, statements, memoranda, and reports. The term "voucher" is sometimes employed as a general designation for the supporting

papers (although this expression is also used in a more narrow and specific sense). Familiar and important examples are purchase and sale orders, purchase and sale invoices, receipt tickets, deposit slips, material requisitions, time tickets, repair authorizations, bills or statements of account, and checks. Mention should also be made of the correspondence with customers, creditors, and others with whom the enterprise maintains relations, and the interdepartmental written communications and instructions. While such papers as letters, telegrams, and internal notices are seldom the immediate source of the accountant's entries they represent a part of the record of operations and may be an important factor in establishing the validity of the entries. In addition there are numerous legal documents of a highly formal nature which furnish important data. Purchase and sale contracts, agreements with respect to leaseholds, insurance policies, assignments of interest, articles of incorporation, deeds, mortgages, promissory notes, bonds, and stock certificates are examples.

In view of their importance as the fundamental source of information, and as an element in the mechanism of office procedure, good administration requires the careful handling and filing of the underlying business papers in accordance with a definite system which has been prescribed by those in charge. Further, it is essential that such papers be preserved for a reasonable time after the period of their immediate use has passed. The original documents are in general the most authentic and reliable records available, and hence they must be accessible for reference in the event of misunderstandings and legal controversies.

The underlying vouchers, although of great importance, are not a part of the accounting records in the strict sense, and no set of vouchers, however complete and well-arranged, can constitute a satisfactory substitute for a system of accounts. It is true that in modern practice the preliminary accounting analysis is sometimes made in connection with the preparation of the original paper, and is indicated on the face of the document, but in general it is not at all feasible to bring about the essential classifications and arrangements without the aid of further technical devices.

Essentials of Recording Process. There are two essential phases of the work of recording business transactions in accounting terms. The first of these consists of the analysis of the original data of the transaction into the component debit and credit entries. This in-

volves, implicitly, the following: (1) ascertaining the particular accounts which are affected (and the selection of appropriate titles where this has not already been done); (2) determining the amount of quantitative change with respect to each account affected; (3) recognizing the columnar (debit and credit) distribution of entries. The second phase consists of recording the results of the preceding work in technical form. That is, the debit and credit entries, once these have been ascertained, must be assembled and listed in compact form in the left and right—debit and credit—columns of the proper accounts. The first part of the process is primarily analytical; the second is largely a clerical task.

In bookkeeping procedure the actual recording is commonly broken up into two main operations corresponding to the two principal types of technical forms or books employed. The first of these is known as "journalizing" and consists of the recording of debit and credit entries in journal form; the second is usually referred to as "posting" and consists of the process of transferring entries from the intermediate record to the ledger or book of accounts. The use of two steps and two technical forms in this connection is entirely a matter of expediency and convenience, and there is some tendency in modern practice, with respect to certain types of transactions and accounts, to combine the two into a single operation and a single type of record. For the time being, however, the independence of the two stages of the process of recording will be recognized and the principal books required will be discussed in terms of such stages.

Journal Records. The journal, one of the main technical devices of bookkeeping, may be defined as *the form or book (or forms or books) in which the classification of the data of transactions into debit and credit entries is first formally exhibited in columnar array.* It may be in either bound or loose-leaf form, and is subject to marked variation with respect to technical details. As ordinarily used this book may be said to have two functions: (1) it presents, in terms of a chronological sequence of transactions, the debit and credit entries; (2) it furnishes brief details in connection with each transaction. The importance of the second function is diminishing, due to the use of files of underlying documents to take care of details. Under the conditions of modern practice the journal records have become highly statistical and impersonal as compared with the corresponding books of an earlier period. The source of the entries in the

journal, as already suggested, are memoranda sheets and other forms of underlying documents.

The simple or primitive journal is a bound or loose-leaf volume of numbered pages, each with two money columns. The essentials of the journal page are indicated by the illustration below.

Even in the case of the simple, two-column journal minor differences in form are possible. The space for account titles and explanations, for example, may be divided vertically into two compartments, one of which is used for titles and the other for supporting details. In any case the following elements are required: (1) date space; (2) space for account titles; (3) provision for details or references; (4) ledger-folio column; (5) debit and credit columns for money amounts. The form shown here is a standard type of journal sheet and one which is satisfactory for the simple journal.

Date		Accounts and Explanations	LF	Dr.		Cr.	
1949							
July	1	First National Bank	1	$5,000	00		
		A, Capital	60			$5,000	00
		Original investment by proprietor					
	2	Rent	22	100	00		
		First National Bank	1			100	00
		Store rent July 1–31, per lease dated June 25—Ck. #1					
	5	Office Equipment	15	200	00		
		Shaw-Walker Co.	35			200	00
		Equipment purchased on account—Inv. #1					
	5	Merchandise	10	480	00		
		International Radio Co. . . .	30			480	00
		10 sets purchased on account—Inv. #2					
	6	Shop Equipment	6	50	00		
		First National Bank	1			50	00
		Tools bought for cash from Black & Co.—Ck. #2					

The use of the journal columns is suggested in the illustration and will be fully explained shortly. The ledger folio ("LF") column is for the purpose of listing the numbers of the ledger pages to which the journal entries are finally transferred. The appearance of such

numbers in the example indicates that the process of posting has already been accomplished for the entries shown. In all journal forms it is important that provision be made for the insertion of ledger folios (or account numbers), as this facilitates comparison of journal records and accounts when the need arises. The dates appearing in the journal should be the dates on which the transactions occurred or reached a recognizable status.

Journalizing. Strictly defined, journalizing is *the technical act of recording transactions in the journal,* on the basis of information drawn from the underlying documents. Reference to the above example will serve to make clear the nature of this operation, as far as the ordinary two-column journal is concerned. As indicated, all debit entries are listed in the left of the two money columns, and all credit entries are recorded in the right column. The name of each account is given an entire line under "Accounts and Explanations." By this means the account titles are made to stand out from the details or explanations, a desirable feature in connection with the process of transferring the entries to the ledger. The account to be debited is given first in each case, and the name of each account to be credited is indented to the right—a useful device in emphasizing the distinction between debit and credit items. Where two or more debit titles or two or more credit titles are involved in a single transaction this scheme should still be followed; that is, all accounts to be debited should first be named (each on a separate line), and the titles of all accounts to be credited, which follow, should be appropriately indented.

Broadly defined the process of journalizing covers more than the technical operation; it includes the underlying interpretation of the transaction, the analytical phase of the work of bookkeeping. This conception of journalizing is useful in the study of accounting, and it is not invalidated in any serious way by the fact that in practice the person who makes the actual record is not always the person who is responsible for the fundamental analysis. Journal entries thus become a very important tool in developing and testing one's grasp of the double-entry system in its basic aspects, aside from their significance in bookkeeping technique. In this connection attention should be called to the use of the "skeleton" journal entry in dealing with certain types of problems and exercises. The essential features of the skeleton entry are: (1) the account titles; (2) the amounts;

(3) the spatial arrangement by means of which debits and credits are distinguished. Dates and other details are of less importance in classroom work than in the business office and should be attached or not as the conditions of the student's work dictate. The following is an illustration:

(Date)		
Merchandise.	$480	
International Radio Co.		$480
(Explanation)		

In reading such entries it is advisable to follow a standard form of expression. The foregoing entry, for example, may be read as follows: "Debit Merchandise, $480; credit International Radio Co., $480."

Selection of Account Titles. An important feature of the work involved in journalizing, in the broad sense, is the selection of account titles. Where a complete chart or classification of account titles has already been worked out and prescribed for the use of the bookkeeper, the process of selection usually consists simply of picking out the appropriate titles from the available list. With respect to most transactions this is not as a rule a very difficult task. Where, however, a large number of cost and expense accounts are employed, full instructions must be issued and carefully followed if improper classification of charges is to be avoided. Further, in dealing with unusual and complex transactions affecting inactive accounts it is advisable that specific instructions as to treatment be issued to the clerks who are making the entries.

Where no complete scheme of accounts is available, or where a transaction requires the use of accounts not previously provided for, special care in the selection of titles is needed. In general it is advisable to make account titles fully descriptive of the type of data covered; vague and unduly abbreviated captions should be avoided. At the same time judgment must be exercised to avoid the introduction of additional accounts that are not needed in view of the main outlines of the system and the requirements of the management for information. Some schemes of accounts in practice exhibit too great elaboration, if not actual duplication, in one direction and unreasonable condensation in another.

To illustrate the problem of title selection reference may be had

to the case of the assets which may be loosely designated by the term "equipment." Although such a broad caption may be adequate in dealing with a simple hypothetical example it would often be unsatisfactory in actual practice. More satisfactory titles are "store equipment," "delivery equipment," "office equipment," etc. Such titles are still broad, but give some concrete indication of the class of assets covered. Having decided, in turn, to use the title "office equipment" to cover all classes of fixed assets in use in the office (desks, chairs, fans, filing cabinets, typewriters, calculators, etc.) it would not be reasonable to open a new account, "chairs," to which to charge the cost of a new chair. This does not deny the fact that in many concerns it is advisable to use a number of accounts to cover office furniture and equipment rather than a single broad title.

It is sufficient here to emphasize two points: (1) the scheme of titles employed should be developed in the light of the nature of the enterprise and the needs of the management; (2) in setting up journal entries care must be taken to make proper use of the chart of accounts which has been authorized or decided upon.

Proving the Journal. An important feature of good journalizing practice is the proving of the journal, and this should be done, as a rule, for each individual page. When a page has been filled with entries the debit and credit columns should be footed and the totals compared. Evidently the two totals should be equal, since they are merely the sums of the debits and credits, respectively, arising in a series of transactions, and each transaction, as has been shown, involves equal entries in opposing columns. If the footings are found to be equal the journal page is said to "prove." If desired the totals may then be carried forward to the top of the following page for inclusion in the next proof, and this process may be continued until the close of the particular fiscal period.

The fact that the journal proves does not demonstrate that the appropriate account titles have been selected, or that the journal is correct in every other respect. It does show that an equal credit entry (or entries) has been made for every debit entry (or entries), and vice versa, and experience has shown this to be a matter of considerable importance in bookkeeping procedure.

Under some conditions the proving of the individual page or sheet as a special operation may not be required or even desirable. Preparation of a systematic proof of journal entries for the entire period

involved is to be recommended, however, except where the entries are recorded by machine methods and the proof is an automatic part of the process of journalizing. It is especially important in handling the journal records that all reasonable precautions be taken to avoid posting incorrect journal entries, as this carries over to the accounts proper the errors made in compiling the intermediate record.

Importance of Journal. The significance of the journal record (whether this be a single book or a group of journalizing media) requires emphasis. In the first place it is in the journal, as was pointed out above, that the results of the analytical phase of the work of recording transactions are first formally presented; the journal exhibits, in orderly fashion, transaction by transaction, the process of resolving the original data of business transactions into accounting terms, debit and credit (left and right) entries. And a systematic record of this type, it can be urged, is essential as a fundamental support for the accounts. After the journal entries have been posted the analysis of underlying data is reflected in the accounts themselves, but the form of the accounts does not emphasize the *process* of analysis. It follows that even if it were technically feasible to post all entries directly from original papers to the accounts the use of clear-cut journal records, which can be easily read in terms of individual transactions, could be defended.

In the second place the journal can be justified on the purely technical side; this type of record is a useful bookkeeping device. The use of the journal is a feature of the development of specialization, and consequent increased efficiency, in clerical work. The recording process, under the conditions of actual business operation, can be broken up to advantage into at least two main operations, of which the preparation of the journal record is one. Further, in serving as a reservoir for debit and credit entries the journal makes possible the postponing of posting to convenient times, and through the use of special columns in the journal the entire process of posting can be very much abridged, as will be shown later.

The importance of the journal records in furnishing an orderly record of details should also be remembered. As already noted the underlying documents have been developed to such a point that they rather than the journal have come to be relied upon to furnish, in large measure, the supporting data. Nevertheless the journal still has a limited function to perform here, particularly in connection

with unusual transactions and adjustments which are not accompanied by standard business papers as are the more common routine occurrences. The recognition of periodic accrued depreciation is an example. Except where such transactions are fully supported by special memoranda on file, to which reference is made in the journal, an explanation should be written up as a part of the journal entry.

Development of Journal. That the simple journal illustrated above is not the only form of journalizing medium used in bookkeeping practice has already been mentioned. As a matter of fact the primitive, two-column form has been largely superseded as the book of original entry by special books and devices. In the typical business office are commonly found a number of distinct and more or less complex journals, each of which is devoted to a particular type or class of transactions. Important examples are the cost journal (or group of journals), the sales journal, the receipts journal, and the check register. As in these illustrations the name used ordinarily suggests the nature of the transactions to which the particular book is restricted. The structure of the particular journal varies with the nature and extent of the business or of the department, the type of transaction involved, and other factors. In some cases very elaborate books are employed, although the tendency in modern practice, in the large enterprise as well as in the small, is to avoid undue complexity in the single book or record. The specialized journal is an important aid in the promotion of clerical economy and efficiency, as will be emphasized later; it also serves to facilitate the isolation of data pertaining to a particular phase or department of the business.

Another development in journal forms is the use of the underlying document itself, or a related copy or sheet, as a journalizing medium. If the original paper is ruled for the purpose and exhibits the account titles and debit and credit entries, it constitutes in effect a form of journal record. The term "journal voucher" is sometimes applied to this type of document, especially where the primary purpose of the record is to authorize entries. In some concerns such forms have largely replaced the regular columnar journals. Posting directly from original records, however, is usually restricted to subsidiary ledgers (explained later in this chapter), the data being recapitulated in columnar journals prior to being transferred to the main accounts.

Notwithstanding these developments the simple journal is far

from being an archaic device, useful merely as a first illustration in the study of bookkeeping technique. Many businesses still use to advantage a general, unspecialized journal, and for this purpose the two-column form is often highly satisfactory. In every enterprise there are a considerable number of miscellaneous transactions which cannot readily be journalized in any of the specialized books, as in the nature of the case special journals must be developed in terms of groups or types of routine happenings. Such transactions should be recorded in the general journal. And if formal journal vouchers are used for these transactions this means, in effect, that the simple journal is still being employed, in loose-leaf form; for such cases, in other words, the file of journal vouchers constitutes the journal. Further, the general journal is a very satisfactory medium for handling the adjusting and transfer entries arising in particular at the close of the accounting period.

Ledger Records. The *ledger,* the second main device in bookkeeping, is the *book or file of accounts.* It consists of the debits and credits of the journal arranged compactly under the various account headings. In its early and still common form the ledger, like the journal, is a bound volume of numbered pages, but in modern practice loose-leaf sheets and cards of many types and forms have come into wide use. In the ledger each account in a particular period may occupy a single page or sheet, or may be given more or less than a page as circumstances require. As a rule the amount of space devoted to each title will depend upon the activity of the account, that is, the number of transactions that will normally affect it during the accounting period. In arranging the accounts in the ledger it is desirable to group them according to the main accounting elements, as follows: (1) assets (including current costs incurred as conditions warrant); (2) liabilities; (3) proprietary equity (including retained earnings); (4) revenues; (5) expenses (including current costs where this seems expedient); (6) income charges and credits. Within each main division arrangement may be numeric (where a numerical chart of accounts is employed) or alphabetic. Order of use in preparing statements is a controlling consideration. Hit-and-miss arrangement should be avoided. The ledger should always be fully indexed to facilitate location of accounts, and tabs and other devices should be used as supplementary aids in this connection.

In the most common form of standard ledger account the page is divided vertically into two main compartments of equal size and each of these is broken up into sections. This type of form is illustrated below. Several other standard forms of ledger page are in use, some of which will be shown later, but for the present attention will be restricted to the one device.

FIRST NATIONAL BANK

1949						1949					
July	1		J1	$5,000	00	July	2		J1	$ 100	00
							6		J1	50	00

Whatever the particular form employed, the ledger account comprises the following: (1) heading or name of account; (2) entry dates; (3) journal folios (or other reference to source of data); and (4) debit and credit amounts. In addition to making provision for these elements the form shown (see example) also includes a space on each side for explanations. Formerly this space was often utilized for references to the accounts containing the corresponding debit or credit entries. In present-day procedure this feature of posting practice has been largely abandoned, although still occasionally employed in connection with closing and transfer entries and in other special situations. Where a separate journalizing medium is used, and the journal page number is listed in the ledger in every case, the details of the transaction giving rise to a particular ledger entry can be readily ascertained and no explanations beyond journal references are needed. The space between date and journal-folio columns, accordingly, serves no very important purpose and could be readily reduced or entirely dispensed with. On the other hand it is a convenience to have the space available in designating balancing and forwarding entries and in making notations in other connections.

It is the function of the ledger to summarize the effects of business transactions in terms of the individual accounts, so that a conclusion concerning the status of each account may be drawn periodically. Or, more precisely, it is the function of the ledger to show under each account heading all positive and negative changes—op-

posing tendencies—pertaining to that account as a result of operations to date, and the balance of the account (excess of debits over credits, or vice versa, depending on the nature of the account), if any, at the end of each significant period.

Comparison of Journal and Ledger. The unit of the journal is the *transaction;* the unit of the ledger is the individual *account.* The journal contains a chronological record of transactions in terms of account titles and debit and credit entries. Each journal entry exhibits equal money entries in opposing columns; each journal page, or any other aggregation of complete journal entries, shows equal debit and credit footings, assuming that journalizing has been carried out properly. In the ledger the debit and credit entries of the individual transaction are separated, one item finding its way to one account, the other to a different account, on a different page. The individual account, accordingly, will show an equation of debits and credits only in particular cases. The left or debit column of all accounts taken together, however, exhibits entries which equal, in total, the amount of all entries in the right or credit column of all accounts.

Notwithstanding these differences there is a very close relationship between the two books in their elementary forms. In each case the same value facts are shown (although not always in the same detail, due to posting in aggregates, a process which will be explained later). In each case the fundamental feature is two columns, one for debit entries, the other for credits; that is, the essential technical element of the accounting structure, two parallel vertical columns, is utilized in both books. The difference lies mainly in the way in which the entries in the columns are arranged. In other words, the ledger can be conceived as merely a rearrangement of the journal entries in such a way that all items affecting a particular account are drawn together. The account with the First National Bank shown on page 125, for example, consists essentially of the journal page shown on page 118, all entries but those affecting the bank account being deleted. In one case the bank account is diffused, is interspersed with data from other accounts; in the other book the same account is segregated, all other elements having been eliminated.

To repeat and summarize, the journal consists of two columns of debit and credit entries, arranged in a chronological sequence of transactions. The ledger may be viewed as the same two columns of

debit and credit entries, but in this case the columns are broken up in terms of accounts rather than transactions.

Posting. The process of transferring entries from the journal to the ledger is known as *posting*. (The process of transferring debits and credits from vouchers to columnar journals is also often referred to as "posting"; likewise the work of transferring data to subsidiary accounts from underlying documents.) It is essentially a clerical task, as all account titles have been selected and all debit and credit entries have been separated in the preceding work of analysis and journalizing. Posting consists simply in the recording of all journal debits (either in detail or in summary) in the debit columns of the accounts affected, and all journal credits in the credit columns of the appropriate accounts.

For a specific illustration of the process of posting it will be convenient to refer to the portion of a journal page shown on page 118 and the ledger account exhibited on page 125. The first debit entry in the account, in the amount of $5,000 and under date of July 1, was posted from page 1 of the journal (as indicated by the journal folio, J1). Upon the occasion of posting, the ledger page of the account with the First National Bank, which also happens to be page 1, was recorded in the ledger folio column of the journal. By this procedure the ledger folio number in the journal serves as an evidence that posting has been accomplished in addition to fulfilling its function as a reference. The item of $5,000 which is found in the credit journal column in conjunction with this charge to First National Bank would be similarly posted to the credit side of the account with A, Capital on page 60 of the ledger (indicated by LF 60), the journal page being concurrently listed in the folio column of the account.

It should not be assumed that all entries are posted on the date on which recorded in the journal. Often this would be neither feasible nor desirable. It is quite proper to permit journal entries to accumulate without posting for a reasonable time. This is especially advantageous where a bookkeeper is doing other work in addition to posting, as it makes it possible for him to post a large number of journal entries without interruption, and with a consequent saving of time and energy. On the other hand posting should not be unduly retarded. Where the entries of many weeks or months are accumulated without posting the books are not "well posted." Such

delay is particularly undesirable in connection with accounts with customers and creditors where it is imperative that the status of each account be kept reasonably up-to-date.

If all transactions are correctly posted the ledger columns exactly represent the debit and credit entries of the journal, although the arrangement is different, as already explained, and the total of all debit items in the ledger equals the total of all credit entries. In other words, where the work of posting is done accurately the ledger columns are continuously in balance.

The method of posting naturally varies with the type of journalizing medium used and, to some extent, with the form of the ledger. Where the journal is of the simple form illustrated in this chapter —having but two columns, one for debits and one for credits—posting is obviously a tedious and time-consuming process. Each journal entry must be transferred separately; that is, for every individual debit in the journal a debit entry must be made in some ledger account, and for every journal credit there must be a credit posting. The development of divided-column journals, however, has greatly reduced the labor of posting, as by this means it is possible to post journal entries, in large measure, by page or periodic totals rather than by individual items. This feature of journal form will be considered in later chapters.

Balancing Ledger Accounts. At the close of each period the balance of every account must be computed, and in some cases—for example, the cash account, and the accounts with customers and current creditors—more frequent determination of balances is required. By the balance of an account is meant the excess of debit entries over credit entries or vice versa; and it is this amount which shows the status of the account on a particular date and is of special importance in the work of preparing periodic reports. After all adjusting and transfer entries have been recorded, the revenue, expense, and income accounts, having served their purpose for the time being, show no balances. On the other hand the typical asset or liability account usually shows a balance, and this is true of the proprietary accounts.

In preceding chapters the procedure of balancing has been illustrated in terms of skeleton accounts. At this point it will be necessary to consider the process more definitely from the standpoint of routine ledger procedure. The first step in balancing consists of

"footing"—that is, totaling—the debit and credit columns of the account, and the calculations may be made by machine or otherwise as circumstances dictate. In hand-posted ledgers such totals are then entered in pen or pencil in small figures immediately under the last regular entries in the respective columns. The next step involves the computation of the difference between the two footings; and this difference is then recorded in terms of a conventional scheme of balancing and ruling. The example shown at the bottom of this page will serve to illustrate the procedure.

It is important that the significance of the balancing rulings be fully understood. The single lines appearing just above the totals indicate that all amounts above these lines are to be added (proper use being made of all preliminary pencil footings), and they also serve to separate the individual entries from the aggregates. The double lines ruled just below the totals indicate that the calculation is complete and that no succeeding amounts are to be combined with the preceding entries. The extension of rulings across date and folio columns serves the minor purpose of insuring the complete separation of the entries pertaining to consecutive periods. The diagonal line drawn across the unused space on the side containing the fewer entries is likewise a convention of minor importance. This practice is supposed to make it more difficult to tamper with the account after it has been balanced.

The balance of the account, in this case an excess of debits of $4,645, is first entered on the opposite side. This conventional procedure is likely to prove confusing to the beginner and hence requires careful explanation. The purpose of balancing, it must be remembered, is to reduce the opposing tendencies to a single net figure. After the initial footings—in this case $5,225 and $580—have

FIRST NATIONAL BANK

1949						1949					
July	1		J1	5,000	00	July	2		J1	100	00
	6		J2	225	00		6		J1	50	00
				5 225	*00*		6		J2	30	00
							7		J2	400	00
										580	*00*
							7	Balance	✓	4,645	00
				5,225	00					5,225	00
July	8	Balance	✓	4,645	00						

been calculated the difference—in this case $4,645—is determined by subtracting the smaller from the larger figure (or adding enough to the smaller to yield the larger), on the machine or by actual calculation on a scratch pad. The bookkeeper then enters the difference on the side showing the smaller footing, in this case the credit side, draws the single lines, records the totals, and makes the double rulings. The calculation of the balance may be checked in this process by adding the balance to the credit footing and comparing the total with the debit footing. The balance, the excess of debits over credits in this case, is then written in below the double rulings on the debit side, dated, as a rule, as of the beginning of the next period or the next business day. This cancels the balancing entry in the opposite column and exhibits the status of the account in a single figure.

These balancing entries in no way change the condition of the account; they are simply a part of a technical procedure which has for its purpose disclosing the actual balance of the account clearly and in such manner as to insure accuracy. Formerly the practice was common of showing the balance as it appears on the lesser side in red ink for the purpose of emphasizing the distinction between this figure and the regular entries posted to the account, and some bookkeepers still make use of this device. It is now generally agreed, however, that no special method of designation, beyond the use of the term "balance," is needed.

Many variations in procedure with respect to rulings and the treatment of balancing entries are employed. One plan is to draw the double rulings without writing in the equivalent totals, the final balance nevertheless being recorded as the opening entry. The procedure outlined here, however, is recommended, especially for the beginner. It accomplishes the essential purpose and it has the special advantage of stressing accuracy in balancing.

Balancing rulings and entries are seldom required except at the close of the regular accounting period; the procedure in summarizing and balancing on other occasions can usually be restricted—as far as the ledger is concerned—to determining the footings and indicating the same in small figures as explained above (with the balance shown informally in the explanation column if desired). To avoid the need for showing entries arising in an entire accounting period the account in the illustration is shown formally balanced after only a few entries in July have been recorded; but this feature of the

example should not be interpreted as an endorsement of interim ruling of accounts.

Trial Balance. A "trial balance" or recapitulation of the ledger must be prepared at the close of each period of operation, as an initial step in the preparation of financial reports, and such a summary is likewise frequently required in proving the columnar—debit and credit—accuracy of the ledger. The trial balance may be defined as a *summarized transcript of the open accounts of the ledger,* prepared in such a manner as to show either total debits and credits, account by account, or net debits and net credits. By the "open" account is meant the live or active account which shows a balance, either debit or credit. Accounts which are precisely "in balance"—that is, accounts which at the date of proving show a total of debit entries equal to the total of credit entries—are deemed to be "closed," at least for the time being, and are usually not included in the trial balance. Those accounts which have been active in the past, but which exhibit neither opening balance nor entries for the period under consideration, are likewise not represented in the ledger proof.

An example of the trial balance appears in the solution of the illustrative exercise presented in the succeeding chapter. In this example total debits and total credits are shown, for each account which has entries on both sides, rather than net debit and net credit balances. This method of preparing the ledger summary has two advantages over the alternative plan: (1) it reduces the number of computations required in summarizing the ledger and preparing the trial balance, thus saving time and minimizing the possibility of error; (2) it results in a more complete showing of the condition of the accounts. Nevertheless the other type of arrangement—the trial balance of differences or net balances—is more common in practice, and there are no serious objections to its use. It is to be noted that the standard two-column journal sheet is the convenient form to employ in the preparation of the trial balance.

After the footings of the individual accounts have been compiled in proper form the debit and credit columns of the trial balance are totaled and the footings are compared. If the totals are the same the ledger may be said to "prove." The importance of this test in bookkeeping practice should not be minimized. The presence of equal debit and credit footings in the trial balance demonstrates,

quite conclusively, that the books have been correctly kept from a columnar or debit and credit standpoint. It is possible for the bookkeeper to make the same arithmetical mistake with respect to each column, in which case the trial balance would still show equal footings, but such an occurrence is rare. On the other hand the proof of the trial balance must not be taken too seriously. The trial balance with equal footings simply indicates that in handling the transactions for the period, including the opening balances, debit entries have been recognized and posted equal in amount to the credit entries which have been authorized and recorded; it does not demonstrate that all transactions which have occurred have been booked, or that proper rules of account classification have been observed.

A clear-cut distinction should be drawn between the trial balance and the "balance sheet" or position statement. The trial balance in the typical case is a composite of the opening balances at the beginning of a particular period and the entries recognizing the explicit transactions which have occurred since the opening date. It is commonly taken, in other words, before the internal or implicit transactions have been fully recognized and before the adjusting and closing entries necessary to reduce the supplementary income statement accounts to their lowest terms have been made. The position statement of assets and equities, on the other hand, is a report of financial status based upon the ledger after the entire process of accounting for the period, including the determination of income or loss and the assignment of this element to the appropriate equity accounts, has been completed and all accounts other than those showing asset and equity balances have been closed.

The preparation and use of the trial balance will be further discussed in later chapters. Attention will also be given in a later connection to the problem of dealing with errors.

Importance of Ledger. The work of posting, as has been explained, simmers down to systematic copying, as the analysis of transactions has been effected prior to or as a phase of the making of journal entries. Similarly the work of footing and balancing accounts and the preparation of the trial balance are essentially routine tasks. These facts, however, should not lead one to minimize the importance of the ledger. The ledger, in a very just sense, is the principal accounting record. The journal might conceivably be dispensed

with; the ledger accounts are a necessity. The details of the form of the ledger record are a relatively unimportant matter, but the very essence of the double-entry system consists in the use of columnar accounts, appropriately headed. The "balance sheet" of position, the fundamental accounting statement, is extended into a system of accounts, the ledger, the journal serving as an intermediate device in the process. Periodically this system is reduced again to statement terms. The ledger can thus be conceived as a highly elaborated structure growing out of the underlying master account.

The ledger is the most technical book of the accounting mechanism. Individual transactions are lost in its columns. They have been translated into numerical effects upon assets and equities (or subsidiary phases of these fundamentals), arranged in a technical columnar scheme. To the layman the ledger is, accordingly, the most difficult to follow of all the books and statements of the accountant. He can read the underlying documents with fair success, and can glean something from a chronological series of journal entries, but without a knowledge of underlying accounting principles he finds the ledger—the most essential of all records—more or less of a mystery. This perhaps partially explains the fact that in the numerous undeveloped and inadequate systems of business records which are still found among the smaller concerns the element which is conspicuously lacking, in whole or in part, is the ledger.

The fact that it is possible to combine journalizing and posting in a single operation the results of which are immediately reflected in the accounts does not imply that such a combination is desirable from the standpoint of efficient bookkeeping. The importance of the journal as an intermediate record was emphasized above. It is often feasible or even desirable in dealing with certain types of problems in the classroom, and in making special studies and reports in practice, to omit the formal act of journalizing in analyzing transactions and in summarizing their effects. In general practice, however, the abbreviated procedure is not to be recommended. (This does not mean that it is improper to prepare both types of record simultaneously by one mechanical operation, where this can be done effectively through the use of machines and special types of forms.)

Development of Ledger Records. Mention has already been made of the fact that the ledger account in practice assumes a wide variety

of specialized forms. The individual account may be a page in a bound volume, a sheet in a binder, or a card in a file—or a portion or section of any one of these devices—and there are numerous possibilities with respect to arrangement of columns and other technical details. The ledger may of course be separated into any number of parts or sections, each of which is on the same level. This constitutes "vertical" division and can be carried as far as may be desired. An important feature of ledger development which should be referred to here is the use of subsidiary ledgers. Subordinate ledgers represent a process of "horizontal" division of main ledger accounts, and thus are a type of duplicate record, a distinct technical development.

The most familiar examples of subsidiary ledgers are the creditors' or payables ledger and the customers' or receivables ledger. As the names suggest, these ledgers contain the individual accounts which represent the parties with whom the enterprise maintains regular credit relations as either a buyer or seller. In a sense these ledgers are not subordinate, as the essential accounting unit here is the record of the status of the particular creditor or particular customer. Nevertheless such ledgers are almost universally accompanied by summary accounts in the general ledger labeled "accounts payable" and "accounts receivable," respectively, or by similar titles, and can be viewed, accordingly, as elaborations of such summary accounts. Another common example of the specialized subsidiary ledger is the stores ledger, a book or file in which materials and supplies are exhibited in more or less detail. Such a ledger duplicates, in detail, the data shown by the general account with materials and supplies. Additional illustrations are the equipment ledger, which contains an account for each class or important item of equipment, the capital stock ledger, made up of the individual accounts of the stockholders, and the payroll register, which shows the status of each employee in relation to the enterprise. As a rule each subsidiary ledger is matched by a single main account, but cases are occasionally found in which a single ledger represents the subdivision of two or more main accounts.

Where special ledgers are employed the term "general ledger" is used to distinguish the principal books of accounts from the subordinate records. The general ledger includes all accounts which it is not necessary or expedient to subdivide, together with the summary or controlling accounts of the subsidiary ledgers. It is par-

ticularly in the general ledger that arrangement in terms of order of use in the statements is desirable.

Account Classification and Numbering. The underlying framework of a scheme of ledger accounts should be the main divisions of the position statement and income statement, as explained earlier. On this background the system should be built up in terms of the nature of the enterprise, the special needs of the management, governmental requirements, and considerations of procedure and clerical efficiency.

In developing a classification of accounts titles should be employed which are sufficiently clear and full to reduce the danger of improper recording to a minimum. See earlier discussion of selection of titles. For large enterprises it is highly desirable that a complete chart of accounts and manual of directions be prepared and made available for the use of those responsible for the work of recording.

Standard classifications of accounts, prescribed or authorized by the various federal and state utility commissions, are generally employed by the railways and other enterprises whose rates are subject to regulation. These classifications have been worked out in considerable detail, including precise account titles and full instructions, and this material in most cases has been issued in the form of printed manuals which outline the entire system. Some elasticity is usually provided for, particularly with reference to the size of the enterprise affected. Standard schemes of accounts applicable to many industrial lines have also been prepared, usually through the efforts of the accounting committees of trade associations, and under the sponsorship of the associations some of the systems proposed have been widely adopted by the enterprises in the particular fields covered.

Where the classification of ledger accounts employed is extensive the use of full titles as a means of designation is not convenient at all times in the routine of recording, and adoption of a system of numbers or other symbols is desirable. Symbols are especially helpful in reducing clerical work, in securing precision and accuracy in the treatment of various classes of entries, and in facilitating analysis (especially where mechanical means are employed) and reference. In general the numeric methods of symbolizing are to be preferred to the mnemonic (the use of key letters which suggest the name of the particular account or of the class or group involved), although in some cases letters in combination with numbers are helpful in

designating both principal divisions and specific subdivisions of the system. The essential requirements of any method are simplicity (to the extent that circumstances permit), definiteness, and adequate flexibility.

In numbering accounts a group of numbers, large enough to meet any needs likely to develop, is assigned to each main element or group of the classification. The numbers 100–199, for example, may be employed to designate the accounts representing liabilities—notes payable, accounts payable, payroll, etc. The use of decimals facilitates expansion. For example, the numbers 80–89 may be employed to designate buildings, 81, the buildings of a particular plant, 81.1, the office building of a particular plant, and 81.11, a specific element in the cost of construction of the particular office building. Commas and dashes are likewise employed in extending and combining numbers for symbolizing purposes.

Questions

1. Name several important examples of *underlying documents* and indicate the general significance of such documents in accounting.

2. What is meant by the "analytical" phase of the recording process? What three steps are comprised in this phase?

3. Of what does the "clerical phase" of the recording process consist? Into what two operations is this phase usually divided?

4. Define the *journal*. What are the two principal functions of this type of record? Why is the importance of the second function diminishing?

5. List the five elements of the journal page. What is the function of the ledger-folio column?

6. Define *journalizing:* (1) in a narrow technical sense; (2) in a broad sense. What is meant by the "skeleton" journal entry? What are the three essentials of such an entry?

7. What constitutes a good account title? Illustrate the need for exercising care in selecting titles in journalizing transactions if errors are to be avoided.

8. When may the journal be said to "prove"?

9. Discuss the importance of the journal: (1) as an underlying support for the accounts; (2) as a technical bookkeeping device; (3) as a source of descriptions of transactions.

10. Name several important examples of specialized journals. What is meant by the "journal voucher," and how is this type of journal form used? What is the position of the general two-column journal in modern practice?

11. Define the *ledger*. Discuss the arrangement of accounts in the ledger. What are the four essential elements of the standard ledger page? Indicate the extent of the present-day use of the fifth element, the explanation column.

12. Contrast the journal and ledger. Indicate the fundamental similarity of the two records.

13. What is meant by *posting?* Describe the operation in detail in terms of the simple journal and standard ledger page. Should a journal entry be posted immediately after journalizing? Explain.

14. What is meant by the "balance" of an account? The "footings" of an account? Describe the process of balancing in detail, including an explanation of the conventional rulings and balancing entries. What are the occasions for balancing?

15. Define the *trial balance*, and indicate its functions. What is meant by the "open" account? Describe the two methods of preparing the trial balance.

16. Precisely what does the proof of the trial balance indicate with respect to the accuracy of bookkeeping operations? Indicate the limitations of this proof.

17. Contrast the trial balance and the "balance sheet."

18. Which of the two records is the more essential to accounting, the journal or the ledger? Explain.

19. Illustrate the difference between "vertical" and "horizontal" division in ledger development. Give several examples of subsidiary ledgers. What is meant by the "general ledger"?

20. Prepare a numbered classification of general-ledger accounts for a particular line of business.

VIII

PRIMARY BOOKS AND PROCEDURES ILLUSTRATED

Data of Business Transactions. The following are assumed to represent the business transactions of John Newlin Co. for the period of July 1–31, 1949:

July 1. John Newlin Co. is organized, with an authorized capital stock of 2,500 shares, to operate a specialized mercantile business. John Newlin contributes cash in amount of $10,000 and receives 1,000 shares; Henry Newlin contributes cash in amount of $5,000 and receives 500 shares; the cash so contributed is deposited in State Savings Bank to the account of John Newlin Co. A building is leased from L. O. Irwin for five years at a monthly rental of $100, and a check is issued for rent for three months. Merchandise is purchased from Paley & Co., $5,000; the goods are received and a check is drawn for amount of invoice. Store equipment is purchased on account from Shaw-Warner Co.; gross amount of invoice is $500, subject to a discount of 5% if paid in 10 days. Office equipment is purchased on account from N. W. Hart, $300. A car is purchased from Huron Auto Sales Co. at a cost of $1,000, and a check for this amount is issued. Merchandise and equipment are insured with Atlantic Casualty Co.; the premium is $100 and is paid by check. Henry Newlin is engaged as general manager at a salary of $500 per month.

July 2. Telephone rental for month of July is paid by check, $10. Office supplies are purchased on account from Mayer-Harder Co., $100; store supplies are purchased from L. E. Ramon, on account, $100. Store equipment is installed by S. T. Newland and his bill is $25; payment is made by check. L. R. French is hired as an assistant at a salary of $50 per week; he begins work on July 2. Cash sales of merchandise, $50. Sales on account: to J. R. Walters, $100; to R. J. Parsons, $35. Bill is received for advertising in the Daily News, $50. Cash is paid for gasoline and oil for the car, $5.

July 5. Merchandise is purchased on account: from Paley & Co., $500; from E. P Smith Co., $600. Sales on account: to F. A. Talbot, $350; to R. J. Parsons, $35. Sales for cash, $100. J. R. Walters returns one unit of merchandise as unsatisfactory which had a sale price of $50. This unit is returned to Paley & Co. and charged to their account, at the cost price of $40. Transportation charges on goods received July 1 are paid by check, $75.

July 6. Shaw-Warner invoice of July 1 is paid by check. J. R. Walters pays the balance of his account and buys additional goods on account, $150.

July 7. Cash in amount of $5,000 is borrowed from State Savings Bank on Company's note due July 7, 1950; annual interest rate charged by Bank is 5%; amount borrowed is immediately deposited.

July 8. The Company buys the building and site it has been renting for $15,000. Payment is made as follows: prepaid rent for 2¾ months; a 5-year, 5% mortgage on the property in amount of $5,000; cash, by check, for the balance. The land is appraised at $5,000. Cash sales, $100. Advertising bill of July 2 is paid with cash.

July 9. Cash sales, $200. Sales to R. J. Parsons on account, $35. L. R. French is paid $50 in cash. Cash on hand in excess of $100 is deposited.

July 11. N. W. Hart's account is paid by check. Sales on account to F. A. Talbot, $70. Transportation charges on purchases of July 5 are paid by check, $20. Cash sales, $100. Sales on account to R. J. Parsons, $35.

July 12. Check is sent to E. P. Smith Co. to cover invoice of July 5. Bill is received for advertising in Daily News, $10.

July 13. Credit memo is received from Paley & Co. covering goods returned on July 5. Cash sales, $150.

July 14. Received from J. R. Walters on account, $100.

July 15. Sales on account to Z. C. Dixon, $50. Cash sales, $350.

July 16. Cash sales, $500. L. R. French is paid $50 in cash. Goods are purchased on account from E. P. Smith Co., $400. Sales on account to F. A. Talbot, $200. Office supplies are purchased for cash, $5. Cash on hand in excess of $100 is deposited.

July 17–31. Cash sales, $1,500. Sales on account: J. R. Walters, $200; R. J. Parsons, $105; F. A. Talbot, $500; Z. C. Dixon, $100. Purchases of merchandise on account: Paley & Co., $500; E. P. Smith Co., $600. Collections on account: J. R. Walters, $150; R. J. Parsons, $140; F. A. Talbot, $1,120. Payments by check: Mayer-Harder Co., $100; L. E. Ramon, $100; Paley & Co., $460; E. P. Smith Co., $400; transportation charges on purchases from July 17–31, $100. Payments in cash are as follows: Daily News, $10; for office supplies, $20; for store supplies, $10; for gasoline and other costs of car operation, $20; salary of French, $100; miscellaneous expenses, $50. All cash receipts in excess of payments in cash are deposited.

The data for the period July 17–31 are combined for the purpose of making it possible to cover an entire month without unduly extending the example.

The foregoing statement of information is a bare outline of transactions and includes only incidental references to underlying documents and other sources. Some additional assumptions in this

connection are found in the journal entries presented on pages 143–149.

The practice of making payments of various kinds directly from undeposited cash is not uncommon, but is not ideal procedure. Better control can generally be secured by depositing all receipts, preferably each day, and establishing an office fund by check to take care of unavoidable disbursements in actual cash. This matter is discussed in a later chapter.

The data regarding costs are given in various ways. The invoice costs of assets such as equipment, merchandise, and supplies are indicated on the dates of acquisition, whether acquired on a cash or credit basis. Advertising cost is given when the bills are presented. On the other hand the first references to rent, telephone cost, and transportation charges are in terms of cash payments. The data of costs are also incomplete in certain particulars which are taken care of in the "supplementary data."

Since the purpose of the example is to illustrate the more fundamental features of procedure no attempt has been made to assume a set of conditions and transactions conforming closely to the circumstances of any specific enterprise or field of business. (For example the credit sales of the typical trading concern, even among the smaller stores, are likely to be more numerous than the corresponding transactions of this hypothetical case.) Moreover, the affairs of an actual small enterprise for one month are likely to show little variety and hence be less satisfactory for illustrative purposes than assumed data.

List of Accounts. Following is the scheme of account titles employed by John Newlin Co.:

1. Cash
2. State Savings Bank
3. Z. C. Dixon
4. R. J. Parsons
5. F. A. Talbot
6. J. R. Walters
7. Merchandise
8. Office Supplies
9. Store Supplies
10. Rent—L. O. Irwin
11. Insurance—Atlantic Casualty Co.
12. Land
13. Building
14. Store Equipment
15. Office Equipment
16. Car
17. Daily News
18. N. W. Hart
19. Mayer-Harder Co.
20. Paley & Co.
21. L. E. Ramon
22. Shaw-Warner Co.

23. E. P. Smith Co.
24. Wages and Salaries Payable
25. Taxes Payable
26. Interest Accrued Payable
27. Notes Payable
28. Dividends Payable
29. Mortgage Payable
30. Capital Stock—John Newlin
31. Capital Stock—Henry Newlin
32. Retained Earnings
33. Sales
34. Other Revenue
35. Merchandise Cost of Sales
36. Services of Employees
37. Supplies Expense
38. Advertising
39. Car Operation
40. Depreciation
41. Miscellaneous Expense
42. Taxes
43. Expense and Revenue
44. Income
45. Interest Charges

Specific names are used as account titles for all credit customers and for all creditors (except in the case of notes payable, mortgage payable, and accrued liabilities for salaries, taxes, etc.) and so no summarizing "accounts receivable" and "accounts payable" are employed (except for statement purposes). In the case of rent and insurance prepayments the titles used indicate the character of the service to be received as well as the names of the parties. The specific conditions can presumably be ascertained by reference to the lease agreement and the insurance policy.

Aside from possible variation in titles the list of accounts given here might be either condensed or expanded at certain points. For example, one asset account might be used for supplies, especially in view of the fact that functional classification of expenses is not stressed.

Two of the accounts listed are inactive during the first month of operation.

Supplementary Data. The following supplementary data are available as of July 31:

(1) Inventory of merchandise, at cost, including applicable transportation charges, is $3,950.

(2) Cost of office supplies on hand, $75; cost of store supplies on hand, $60.

(3) Unexpired insurance amounts to $95.

(4) Estimated depreciation: building, $20; store equipment, $4; office equipment, $3; car, $30.

(5) Interest accrued: on notes payable, $16.44; on mortgage, $15.75.

(6) Manager's salary accrued, $500.

(7) Rent expired to July 8 and all charges in accounts 36–42 are assumed to apply to July revenue.

(8) Estimated taxes accrued, $75.

The foregoing include no details as to how the conclusions given are reached. By way of illustration it may be assumed that the amount of $4 per month as depreciation of store equipment is found by estimating the service life of the asset at ten years, with an estimated net salvage value of $20. Similarly an expiration of $30 per month in the case of the car may reflect an estimated life in the business of two years and an estimated "trade-in value" of $280. In practice annual rates based on service lives conservatively estimated are often applied to the costs of depreciable assets without precise consideration of the amount recoverable on retirement.

Presumably the car contains some gasoline and oil and hence the assumption made as to car operation costs is one of convenience, not exactly in accord with conditions.

Under some conditions a portion of such costs as insurance, salaries, depreciation, etc., may be applicable to goods on hand. However, there are obvious difficulties in the way of making dependable estimates of such costs assignable to inventories and throughout the trading field it is the prevailing practice to take the position stated under (7), above.

Since the Company began operations July 1 there is the possibility that some of the costs incurred should be capitalized as organization and development costs, but this possibility is ignored in this example.

The amount of interest accrued on the note payable is 24/365 of $250, a year's interest on $5,000 at 5% per annum; in the case of the mortgage the amount accrued is 23/365 of a year's interest of $250. For convenience in computation it is sometimes assumed that the year consists of 360 days, divided into twelve months of 30 days each. The rate stated in contracts drawing interest may always be assumed—in the absence of a definite statement to the contrary—to be an annual rate. In determining the term of the agreement the general rule is to exclude the first day and include the last.

Among the principal kinds of taxes to which a corporation is subject are property taxes, social security or payroll taxes, and income taxes, and such taxes may be payable to a number of different governmental entities. Details are avoided in this example.

In most actual situations a complete recognition of costs incurred in a particular period will involve accruing at the end of the period charges for utility services and various other factors for which bills have not yet been received or booked.

JOURNAL—JOHN NEWLIN CO. (1)

Date		Accounts and Explanations	LF	Dr.	Cr.
1949					
July	1	State Savings Bank	2	15,000 00	
		Capital Stock—John Newlin	30		10,000 00
		Capital Stock—Henry Newlin	31		5,000 00
		Issue of 1,500 shares for cash—1,000 to John Newlin and 500 to Henry Newlin—per stock certificate stubs and deposit slip			
		Rent—L. O. Irwin	10	300 00	
		State Savings Bank	2		300 00
		Three months' rent to L. O. Irwin, per lease agreement, check #1			
		Merchandise	7	5,000 00	
		State Savings Bank	2		5,000 00
		Purchased for cash from Paley & Co., cost invoice #1, check #2			
		Store Equipment	14	475 00	
		Shaw-Warner Co.	22		475 00
		Purchased on account, cost invoice #2			
		Office Equipment	15	300 00	
		N. W. Hart	18		300 00
		Purchased on account, cost invoice #3			
		Car	16	1,000 00	
		State Savings Bank	2		1,000 00
		Car purchased from Huron Auto Sales Co., cost invoice #4, check #3			
		Insurance—Atlantic Casualty Co.	11	100 00	
		State Savings Bank	2		100 00
		Premium on casualty policy with Atlantic Casualty Co., cost invoice #5, check #4			
	2	Miscellaneous Expense	41	10 00	
		State Savings Bank	2		10 00
		Telephone rent for July, cost invoice #6, check #5			
		Office Supplies	8	100 00	
		Mayer-Harder Co.	19		100 00
		Purchased on account, cost invoice #7			
		Store Supplies	9	100 00	
		L. E. Ramon	21		100 00
		Purchased on account, cost invoice #8			
				22,385 00	*22,385 00*

(2)

		Store Equipment	14	25 00	
		State Savings Bank	2		25 00
		Payment of S. T. Newland's bill cost invoice #9, check #6			
		Cash	1	50 00	
		Sales	33		50 00
		Cash sales for day, per register			
		J. R. Walters	6	100 00	
		R. J. Parsons	4	35 00	
		Sales	33		135 00
		Account sales, sales invoices #1 and 2			
		Advertising	38	50 00	
		Daily News	17		50 00
		Service received, cost invoice #10			
		Car Operation	39	5 00	
		Cash	1		5 00
		Gasoline for car, cash voucher #1			
	5	Merchandise	7	500 00	
		Paley & Co	20		500 00
		Purchased on account, cost invoice #11			
		Merchandise	7	600 00	
		E. P. Smith Co.	23		600 00
		Purchased on account, cost invoice #12			
		F. A. Talbot	5	350 00	
		R. J. Parsons	4	35 00	
		Sales	33		385 00
		Account sales, sales invoices #3 and 4			
		Cash	1	100 00	
		Sales	33		100 00
		Cash sales for day, per register			
		Sales	33	50 00	
		J. R. Walters	6		50 00
		Unit of merchandise returned, per credit memo #1			
		Paley & Co.	20	40 00	
		Merchandise	7		40 00
		Unit returned to Paley & Co., cost invoice #11, returns memo #1			
		Merchandise	7	75 00	
		State Savings Bank	2		75 00
		Transportation charges on cost invoice #1, check #7			
				2,015 00	*2,015 00*

(3)

	6	Shaw-Warner Co.	22	475 00	
		State Savings Bank	2		475 00
		Payment of invoice #2, check #8			
		Cash	1	50 00	
		J. R. Walters	6		50 00
		Collection on account, receipt slip #1			
		J. R. Walters	6	150 00	
		Sales	33		150 00
		Account sale, sales invoice # 5			
	7	State Savings Bank	2	5,000 00	
		Notes Payable	27		5,000 00
		Borrowed from Bank at 5%, due July 7, 1950			
	8	Land	12	5,000 00	
		Building	13	10,000 00	
		State Savings Bank	2		9,725 00
		Rent—L. O. Irwin	10		275 00
		Mortgage Payable	29		5,000 00
		Purchase of property from L. O. Irwin per sales agreement dated July 8, check #9			
		Cash	1	100 00	
		Sales	33		100 00
		Cash sales for day, per register			
		Daily News	17	50 00	
		Cash	1		50 00
		Payment of invoice #10, cash voucher #2			
	9	Cash	1	200 00	
		Sales	33		200 00
		Cash sales for day, per register			
		R. J. Parsons	4	35 00	
		Sales	33		35 00
		Account sale, sales invoice #6			
		Services of Employees	36	50 00	
		Cash	1		50 00
		Salary of French, cash voucher #3			
		State Savings Bank	2	295 00	
		Cash	1		295 00
		Per deposit slip			
	11	N. W. Hart	18	300 00	
		State Saving Bank	2		300 00
		Payment of invoice #3, check #10			
		F. A. Talbot	5	70 00	
		Sales	33		70 00
		Account sale, sales invoice #7			
				21,775 00	*21,775 00*

(4)

	Merchandise	7	20 00	
	State Savings Bank.	2		20 00
	Transportation charges on invoices #11 and 12, check #11			
	Cash	1	100 00	
	Sales.	33		100 00
	Cash sales for day, per register			
	R. J. Parsons	4	35 00	
	Sales.	33		35 00
	Account sale, sales invoice #8			
12	E. P. Smith Co.	23	600 00	
	State Savings Bank.	2		600 00
	Payment of cost invoice #12, check #12			
	Advertising	38	10 00	
	Daily News.	17		10 00
	Service received, cost invoice #13			
13	Cash	1	150 00	
	Sales.	33		150 00
	Cash sales for day, per register			
14	Cash	1	100 00	
	J. R. Walters	6		100 00
	Collection on account, receipt slip #2			
15	Z. C. Dixon	3	50 00	
	Sales.	33		50 00
	Account sale, sales invoice #9			
	Cash	1	350 00	
	Sales.	33		350 00
	Cash sales for day, per register			
16	Cash	1	500 00	
	Sales	33		500 00
	Cash sales for day, per register			
	Services of Employees	36	50 00	
	Cash.	1		50 00
	Payment to French for week, cash voucher #4			
	Merchandise	7	400 00	
	E. P. Smith Co.	23		400 00
	Purchased on account, cost invoice # 14			
	F. A. Talbot	5	200 00	
	Sales.	33		200 00
	Account sales, sales invoice #10			
			2,565 00	*2,565 00*

(5)

		Office Supplies	8	5 00	
		Cash	1		5 00
		Purchased for cash, cash voucher #5			
		State Savings Bank	2	1,145 00	
		Cash	1		1,145 00
		Per deposit slip			
	17-31	Cash	1	1,500 00	
		Sales	33		1,500 00
		Cash sales, per register			
		J. R. Walters	6	200 00	
		R. J. Parsons	4	105 00	
		F. A. Talbot	5	500 00	
		Z. C. Dixon	3	100 00	
		Sales	33		905 00
		Account sales, sales invoices #11–19			
		Merchandise	7	1,100 00	
		Paley & Co.	20		500 00
		E. P. Smith Co.	23		600 00
		Purchased on account, cost invoices #15 and 16			
		Cash	1	1,410 00	
		J. R. Walters	6		150 00
		R. J. Parsons	4		140 00
		F. A. Talbot	5		1,120 00
		Collections on account, receipt slips #3–6			
		Mayer-Harder Co.	19	100 00	
		L. E. Ramon	21	100 00	
		Paley & Co.	20	460 00	
		E. P. Smith Co.	23	400 00	
		State Savings Bank	2		1,060 00
		Payment of cost invoices #7, 8, 11, 14—checks #13–16			
		Merchandise	7	100 00	
		State Savings Bank	2		100 00
		Transportation charges on cost invoices #15 and 16—check #17			
		Daily News	17	10 00	
		Office Supplies	8	20 00	
		Store Supplies	9	10 00	
		Car Operation	39	20 00	
		Services of Employees	36	100 00	
		Miscellaneous Expense	41	50 00	
		Cash	1		210 00
		Payment of cost invoice #13 and cash outlays for supplies, car operation, and sundry items, cash vouchers #6–17			
				7,435 00	*7,435 00*

(6)

		State Savings Bank	2	2,700 00	
		Cash	1		2,700 00
		Per deposit slips			
		Adjusting and Closing Entries			
	31	Merchandise Cost of Sales	35	3,805 00	
		Merchandise	7		3,805 00
		To recognize inventory, per inventory sheets, and resulting cost of sales			
		Supplies Expense	37	100 00	
		Office Supplies	8		50 00
		Store Supplies	9		50 00
		To record cost of supplies used, per inventory sheets			
		Miscellaneous Expense	41	5 00	
		Insurance—Atlantic Casualty Co.	11		5 00
		To record insurance cost applicable to operations of July, per policy			
		Depreciation	40	57 00	
		Building	13		20 00
		Store Equipment	14		4 00
		Office Equipment	15		3 00
		Car	16		30 00
		To record estimated depreciation of building and equipment, per schedule			
		Interest Charges	45	32 19	
		Interest Accrued Payable	26		32 19
		To recognize interest accrued to date on note payable, $16.44, and on mortgage payable, $15.75			
		Services of Employees	36	500 00	
		Wages and Salaries Payable	24		500 00
		To recognize accrued salary of Henry Newlin for July			
		Taxes	42	75 00	
		Taxes Payable	25		75 00
		To record estimated accrued taxes for July, per schedule			
		Sales	33	4,965 00	
		Expense and Revenue	43		4,965 00
		To close sales account			
		Expense and Revenue	43	3,805 00	
		Merchandise Cost of Sales	35		3,805 00
		To close merchandise cost of sales			
		Expense and Revenue	43	700 00	
		Services of Employees	36		700 00
		To close service cost			
				6,744 19	*16,744 19*

(7)

		Expense and Revenue Supplies Expense To close supplies expense	43 37	100 00	 100 00
		Expense and Revenue Advertising To close advertising cost	43 38	60 00	 60 00
		Expense and Revenue Car Operation To close car operation	43 39	25 00	 25 00
		Expense and Revenue Depreciation To close depreciation	43 40	57 00	 57 00
		Expense and Revenue Miscellaneous Expense To close miscellaneous expense	43 41	65 00	 65 00
		Expense and Revenue Rent To close balance of rent account	43 10	25 00	 25 00
		Expense and Revenue Taxes To close taxes	43 42	75 00	 75 00
		Expense and Revenue Income To transfer net income to income account	43 44	53 00	 53 00
		Income Interest Charges To close interest charges to income	44 45	32 19	 32 19
		Income Retained Earnings To transfer income balance to retained earnings	44 32	20 81 *513 00*	 20 81 *513 00*

Comments on Journal Entries (Before Adjustments). In the journal entries for John Newlin Co. shown on pages 143–149 the elementary, two-column form is used throughout. In general the details given are confined to a very brief indication of the nature of the transaction coupled with a reference to underlying documents. As stated in the preceding chapter descriptive details are largely suppressed in modern journalizing. The series of numbers used to refer to cost invoices may be assumed to be a means of designation employed in the Company's office rather than the original numbers attached by the vendors. Series of numbers are also used to designate the checks issued, the invoices employed in connection with credit

sales, etc. The purpose of the references is to suggest the nature of some of the documents lying back of the various classes of transactions and to emphasize the need of attaching to accounting entries some means of tracing the source of the data. In some cases, no doubt, the date of the transaction and the account titles furnish a sufficient means of identification.

The journal pages are numbered and each page is footed and proved, but the footings are not carried forward as is sometimes done. For each day the date is indicated only for the first transaction. The cash sales of each day are journalized as a single transaction. Such summarizing is especially desirable where a large number of similar transactions occur daily. The numbers in the ledger reference column are those attached to the ledger accounts (see pages 152–154).

Recording of the net cost of store equipment immediately is preferred procedure. If the gross amount were recognized at date of purchase it would be necessary to credit equipment with $25 at date of payment.

Charging the prepayment for telephone service directly to an expense account results in a temporary misstatement. However, in the case of current service costs this procedure is often followed and it is not seriously objectionable provided the proper adjustments are made at the end of the accounting period.

The transportation cost of purchases (July 5, and later) is charged directly to merchandise account. A separate account can be used for such charges, but as a rule this is not necessary and may encourage improper periodic assignment of charges. Transportation cost of merchandise, like the installation cost of equipment, is just as clearly an element of the cost of goods as the invoice price. Indeed, where goods are acquired with delivery charges paid to the buyer's place of business the cost of transportation may be included, with or without segregation, in the amount of the invoice. In some situations periodic freight bills include charges on deliveries to customers as well as the amount of in-freight, and here a careful split of the total cost is necessary. If a separate transportation account is used it is important that the amount therein be correctly applied at the end of each period.

The recording of the return of merchandise to Paley & Co. on July 5 assumes that the vendor will accept the return and issue a credit memo to John Newlin Co.

The transactions for the period July 17–31 are recorded in summary form, in accordance with the way in which the data are given.

The use of the simple form of journal in this example does not mean that this form is being recommended, for actual enterprises, as an exclusive journalizing medium. Journal developments are considered in later chapters.

Comments on Adjusting and Closing Entries. The account titles selected and the steps followed in the process of making adjusting and closing entries in this case are purely illustrative; many reasonable variations are possible. It should be emphasized, however, that no procedures are justified which do not conform to the conditions given and which yield improper figures with respect to amounts of revenue, expenses, net income, assets, liabilities, and stockholders' equity. "Reasonable variations" in procedure, in other words, alter neither facts nor conclusions.

Internal, functional classification of costs is not emphasized in this example. Thus the cost of services of employees is charged directly to expense and revenue, without reclassification. Supplies expense, depreciation, and taxes are similarly handled. Car depreciation might be charged to "Car Operation" instead of "Depreciation," although the procedure followed has the advantage of showing all depreciation cost in a single account. The amounts of estimated depreciation are credited directly to the asset accounts. An alternative—and much more common—procedure is explained in a later chapter.

The entries necessary to recognize accrued salaries, taxes, and interest are in a distinct class in that they place on the books charges and liabilities not previously recognized. In all other cases in the illustration the process of adjusting and closing consists of sorting out and assembling revenue and cost data already recorded in original form.

LEDGER ACCOUNTS—JOHN NEWLIN CO.

(Following are selected accounts from the ledger of John Newlin Co. The other accounts may be readily prepared from the journal entries given.)

CASH (1)

Date		Item	F	Debit	Date		Item	F	Credit
1949					1949				
July	2		J2	50 00	July	2		J2	5 00
	5		J2	100 00		8		J3	50 00
	6		J3	50 00		9		J3	50 00
	8		J3	100 00		9		J3	295 00
	9		J3	200 00		16		J4	50 00
	11		J4	100 00		16		J5	5 00
	13		J4	150 00		16		J5	1,145 00
	14		J4	100 00		17	–31	J5	210 00
	15		J4	350 00		17	–31	J6	2,700 00
	16		J4	500 00					*4,510 00*
	17	–31	J5	1,500 00		31	Balance	✓	100 00
	17	–31	J5	1,410 00					
				4,610 00					
				4,610 00					4,610 00
Aug.	1	Balance	✓	100 00					

STATE SAVINGS BANK (2)

Date		Item	F	Debit	Date		Item	F	Credit
1949					1949				
July	1		J1	15,000 00	July	1		J1	300 00
	7		J3	5,000 00		1		J1	5,000 00
	9		J3	295 00		1		J1	1,000 00
	16		J5	1,145 00		1		J1	100 00
	17	–31	J6	2,700 00		2		J1	10 00
				24,140 00		2		J2	25 00
						5		J2	75 00
						6		J3	475 00
						8		J3	9,725 00
						11		J3	300 00
						11		J4	20 00
						12		J4	600 00
						17	–31	J5	1,060 00
						17	–31	J5	100 00
									18,790 00
						31	Balance	✓	5,350 00
				24,140 00					24,140 00
Aug.	1	Balance	✓	5,350 00					

J. R. WALTERS (6)

Date		Item	F	Debit	Date		Item	F	Credit
1949					1949				
July	2		J2	100 00	July	5		J2	50 00
	6		J3	150 00		6		J3	50 00
	17	–31	J5	200 00		14		J4	100 00
				450 00		17	–31	J5	150 00
									350 00
						31	Balance	✓	100 00
				450 00					450 00
Aug.	1	Balance	✓	100 00					

MERCHANDISE (7)

1949						1949					
July	1		J1	5,000	00	July	5		J2	40	00
	5		J2	500	00		31		J6	3,805	00
	5		J2	600	00		31	Balance	√	3,950	00
	5		J2	75	00						
	11		J4	20	00						
	16		J4	400	00						
	17	–31	J5	1,100	00						
	17	–31	J5	100	00						
				7,795	*00*						
				7,795	00					7,795	00
Aug.	1	Balance	√	3,950	00						

OFFICE SUPPLIES (8)

1949						1949					
July	2		J1	100	00	July	31		J6	50	00
	16		J5	5	00		31	Balance	√	75	00
	17	–31	J5	20	00						
				125	*00*						
				125	00					125	00
Aug.	1	Balance	√	75	00						

OFFICE EQUIPMENT (15)

1949						1949					
July	1		J1	300	00	July	31		J6	3	00
							31	Balance	√	297	00
				300	00					300	00
Aug.	1	Balance	√	297	00						

N. W. HART (18)

1949						1949					
July	11		J3	300	00	July	1		J1	300	00

PALEY & CO. (20)

1949						1949					
July	5		J2	40	00	July	5		J2	500	00
	17	–31	J5	460	00		17	–31	J5	500	00
				500	*00*					*1,000*	*00*
	31	Balance	√	500	00						
				1,000	00					1,000	00
						Aug.	1	Balance	√	500	00

SALES (33)

Date		Item	Folio	Amount	Date		Item	Folio	Amount
1949					1949				
July	5		J2	50 00	July	2		J2	50 00
	31		J6	4,965 00		2		J2	135 00
						5		J2	385 00
						5		J2	100 00
						6		J3	150 00
						8		J3	100 00
						9		J3	200 00
						9		J3	35 00
						11		J3	70 00
						11		J4	100 00
						11		J4	35 00
						13		J4	150 00
						15		J4	50 00
						15		J4	350 00
						16		J4	500 00
						16		J4	200 00
						17	–31	J5	1,500 00
						17	–31	J5	905 00
									5,015 00
				5,015 00					5,015 00

EXPENSE AND REVENUE (43)

Date		Item	Folio	Amount	Date		Item	Folio	Amount
1949					1949				
July	31		J6	3,805 00	July	31		J6	4,965 00
	31		J6	700 00					
	31		J7	100 00					
	31		J7	60 00					
	31		J7	25 00					
	31		J7	57 00					
	31		J7	65 00					
	31		J7	25 00					
	31		J7	75 00					
	31		J7	53 00					
				4,965 00					4,965 00

INCOME (44)

Date		Item	Folio	Amount	Date		Item	Folio	Amount
1949					1949				
July	31		J7	32 19	July	31		J7	53 00
	31		J7	20 81					
				53 00					53 00

For the sake of clearness the closing entries are shown here in greater detail than would be necessary in practice. It would be possible to assemble all charges and credits to "Expense and Revenue" and reduce them to a single debit and one credit entry, although if

this were done the summary operating account would not furnish a convenient source of information for the income statement.

Comments on Ledger Accounts. In this illustration the list of accounts (see pages 140–141) is arranged by main groups, with some reference to the order in which they will be used for statement purposes. Alphabetic listing may be useful, particularly in subsidiary ledgers; arrangement and titles may also stress departmental character, location (in the case of physical assets), and other means of identification. Rearrangement is facilitated by the use of a loose-leaf ledger. In the example each account is considered to be recorded on a separate sheet or card and is given a number for the purpose of journal reference.

The dates attached to the ledger entries in the selected accounts shown correspond to the dates of the transactions as shown in the journal. This need not be taken to indicate that each day's journal entries are immediately posted; it is possible to match ledger and journal dates even if posting is postponed provided the process is accomplished in terms of individual journal entries, each of which is given a specific date. As explained before, the data for the period July 17–31 are given in combined form and are journalized and posted accordingly.

The italicized footings shown in certain accounts are for the purpose of compiling the trial balance as of July 31, before adjusting and closing entries are recorded. Where only one figure appears on either side of an account such figure represents a footing as it stands.

Complete balancing and ruling of accounts is undertaken only at the end of the regular accounting period. However, in the case of cash, bank accounts, accounts receivable, and accounts payable, balances may be required frequently (although it does not follow that formal ruling is desirable in this connection).

For the sake of consistency, and to emphasize sharply the distinction between periods, the balancing and ruling procedure may be followed even in the case of accounts such as "Land," with only a single entry. It is recommended that formal column totals be shown in the case of all accounts which have more than one entry in one or both columns. It should be borne in mind that with a period of greater length, and more entries per account, the process of book-

keeping is not so heavily loaded with balancing procedure as it is in this illustration.

JOHN NEWLIN CO.
Trial Balance, July 31, 1949

LF	Account Titles	Dr.	Cr.
1	Cash	$ 4,610.00	$ 4,510.00
2	State Savings Bank	24,140.00	18,790.00
3	Z. C. Dixon	150.00	
4	R. J. Parsons	245.00	140.00
6	J. R. Walters	450.00	350.00
7	Merchandise	7,795.00	40.00
8	Office Supplies	125.00	
9	Store Supplies	110.00	
10	Rent—L. O. Irwin	300.00	275.00
11	Insurance—Atlantic Casualty Co.	100.00	
12	Land	5,000.00	
13	Building	10,000.00	
14	Store Equipment	500.00	
15	Office Equipment	300.00	
16	Car	1,000.00	
20	Paley & Co.	500.00	1,000.00
23	E. P. Smith Co.	800.00	1,400.00
27	Notes Payable		5,000.00
29	Mortgage Payable		5,000.00
30	Capital Stock—John Newlin		10,000.00
31	Capital Stock—Henry Newlin		5,000.00
33	Sales	50.00	5,015.00
36	Services of Employees	200.00	
38	Advertising	60.00	
39	Car Operation	25.00	
41	Miscellaneous Expense	60.00	
		$56,520.00	$56,520.00

Comments on Trial Balance and Schedule of Final Ledger Balances. The trial balance shown above is prepared after all business transactions for the month have been journalized and posted but *before the adjusting and closing entries are recorded.* It is compiled in this case in terms of total debit and credit footings, account by account. (The accounts showing equal footings are not included.) In practice the trial balance of debit and credit differences is more common, but the method followed here has merit, particularly from the standpoint of the beginning student. The arrangement of titles follows the order in which the ledger accounts are presented.

The compilation of final balances (page 157) serves as an additional check on bookkeeping accuracy. Such a schedule represents

JOHN NEWLIN CO.
Final Ledger Balances, July 31, 1949

LF	Account Titles	Dr.	Cr.
1	Cash	$ 100.00	$
2	State Savings Bank	5,350.00	
3	Z. C. Dixon	150.00	
4	R. J. Parsons	105.00	
6	J. R. Walters	100.00	
7	Merchandise	3,950.00	
8	Office Supplies	75.00	
9	Store Supplies	60.00	
11	Insurance—Atlantic Casualty Co.	95.00	
12	Land	5,000.00	
13	Building	9,980.00	
14	Store Equipment	496.00	
15	Office Equipment	297.00	
16	Car	970.00	
20	Paley & Co.		500.00
23	E. P. Smith Co.		600.00
24	Wages and Salaries Payable		500.00
25	Taxes Payable		75.00
26	Interest Accrued Payable		32.19
27	Notes Payable		5,000.00
29	Mortgage Payable		5,000.00
30	Capital Stock—John Newlin		10,000.00
31	Capital Stock—Henry Newlin		5,000.00
32	Retained Earnings		20.81
		$26,728.00	$26,728.00

JOHN NEWLIN CO.
Income Statement
Month of July, 1949

Sales (less returns of $50.00)		$4,965.00
Expenses and Taxes:		
Merchandise Cost of Sales	$3,805.00	
Services of Employees	700.00	
Supplies Expense	100.00	
Advertising	60.00	
Car Operation	25.00	
Depreciation	57.00	
Rent*	25.00	
Miscellaneous Expense	65.00	
Taxes	75.00	4,912.00
Net Income		$ 53.00
Interest Charges		32.19
Earnings of Stockholders		$ 20.81
Retained Earnings, July 1		—0—
Retained Earnings, July 31 (see position statement)		$ 20.81

*Rent applicable to period July 1–8, prior to purchase of land and building.

the condition of the ledger after the process of bookkeeping for the period is complete and the accounts have been again reduced to their lowest terms, asset and equity balances. A schedule of this character, however, does not constitute a satisfactory form of statement for report purposes.

JOHN NEWLIN CO.
Position Statement
July 31, 1949

Assets

Current:		
Cash on Hand	$ 100.00	
State Savings Bank	5,350.00	
Accounts Receivable	355.00	
Merchandise	3,950.00	
Supplies	135.00	
Unexpired Insurance	95.00	$ 9,985.00
Fixed:		
Land	$ 5,000.00	
Building*	9,980.00	
Store Equipment*	496.00	
Office Equipment*	297.00	
Car*	970.00	16,743.00
		$26,728.00

Equities

Current Liabilities:		
Accounts Payable	$ 1,100.00	
Notes Payable (5%, due July 7, 1950)	5,000.00	
Wages and Salaries Payable	500.00	
Taxes Payable	75.00	
Interest Accrued Payable	32.19	$ 6,707.19
Mortgage Payable (5%, due July 8, 1954)		5,000.00
Total Liabilities		$11,707.19
Stockholders' Equity:		
Capital Stock	$15,000.00	
Retained Earnings (see income statement)	20.81	15,020.81
		$26,728.00

* Cost less depreciation.

Comments on Statements. The income statement (page 157) is compiled largely from the expense and revenue account, and each of the charges to this account is represented by an item in the statement. If desired the expenses might be shown in less detail.

Interest charges are shown as a deduction from "net income,"

in line with the discussion in Chapter VI. In this case the amount of "borrowed capital" is relatively large.

It is noticeable that the earnings of stockholders for the month is of negligible amount. This need not be surprising for a new business, just getting under way. In general the single month is a less significant period for income reckoning than the year. The short period is used here for the purpose of abridging the illustration.

The position statement (page 158) is compiled from the schedule of final ledger balances. The two items of supplies as shown by the ledger are combined in the statement. The accounts receivable and the accounts payable are shown in totals, with the names of the individual debtors and creditors suppressed.

Note that the two statements are tied together through the item of retained earnings.

Summary of Bookkeeping Process. At this point it is worthwhile to summarize by listing the main steps or operations which comprise the process of bookkeeping, particularly in its elementary form. These are:

1. Journalizing day-to-day business transactions.
2. Posting—transferring the journal entries for ordinary transactions to the ledger.
3. Periodic footing of accounts and proving of ledger through trial balance.
4. Preparing adjusting and closing entries in journal form.
5. Posting adjusting and closing entries.
6. Final proving of ledger.
7. Formal balancing and ruling of accounts.

IX

CONTROLLING ACCOUNTS AND SUBSIDIARY LEDGERS

Controlling Accounts—Definition and Purpose. A "controlling" account may be defined as *an account which exhibits in summary form data which are shown elsewhere, concurrently, in detail.* In each case the accounts controlled or summarized, a more or less extensive group, constitute a specialized subsidiary ledger. Controlling accounts should be distinguished from summarizing accounts which are used periodically to recapitulate particular classes of data. The controlling account is a continuous record, matched by a list of supporting accounts.

The controlling account is a useful device where it is desired to have available a continuous summary of some important group of accounts, or, put conversely, where it is advisable to maintain a continuous detailed classification to support one of the primary ledger elements. It is a convenience to the management, for example, to be able to determine at a moment's notice the amount of outstanding customers' balances, and to serve this need, if the accounts are at all numerous, the general ledger should include an account—labeled "Accounts Receivable," "Customers' Ledger," or by other appropriate title—which is a control or summary of the ledger of customers' accounts. Similarly, the management may wish to be supplied with frequent reports of the total net balance of the current creditors' accounts, and the use of a summary "Accounts Payable" in the general ledger facilitates the preparation of such reports. Another common example of the controlling account, of a somewhat different type, is the materials or merchandise account of the general ledger which is supported by a more or less elaborate stores ledger.

It should be emphasized that the use of controlling summaries in

connection with customers' and creditors' accounts is optional, whereas the maintenance of the individual accounts is absolutely necessary. What is required in this connection are accurate records which exhibit at all times the status of each party involved, and controlling accounts are evidently of no value in determining the amount due from the particular customer or due to the particular creditor. In the case of merchandise, equipment, or other current or fixed costs, on the other hand, the accounts which show such costs by broad classes are, in a sense, the essential records, while the supporting classifications and ledgers are a product of the nature of the enterprise and of managerial policy, and vary in character and extent with these factors.

The reasonable use of controlling accounts is advantageous from the standpoint of the check on clerical accuracy thereby afforded. It is a maxim of good bookkeeping that the controlling account must be in agreement with the group of individual accounts which it summarizes, or vice versa, and any discrepancy between the two related records is a signal for a careful investigation covering the entries themselves and the procedure employed. This point is especially significant only where large groups of active accounts are involved, and it does not warrant the unlimited development of duplicate recording.

Where controlling accounts are freely used the number of accounts required for the general ledger is much reduced, and this makes it possible, even in large enterprises, to keep all of the accounts of the business, in summary if not in detail, in one volume or binder. The backbone of the entire system can thus be maintained in compact form, and this is a marked convenience, especially in connection with the preparation of the financial statements.

Extent of Use of Subsidiary Ledgers. In small concerns the use of controlling accounts and subsidiary ledgers seldom is carried beyond accounts receivable, accounts payable, and merchandise or stores. In the large corporation, on the other hand, the ledger records are sometimes elaborated to such a point that the majority of the accounts in the general ledger are supported by formal specialized ledgers or by detailed statistical records akin to subsidiary ledgers. The accounts with fixed assets such as land, buildings, and equipment, for example, control card files or other types of records in

which the unit is the particular parcel of land or the specific building or machine (or, in some cases, the particular structural element of the building or machine). The main accounts with notes receivable, and securities owned such as stocks and bonds, are supported by records of particular issues and blocks. The inventory accounts, representing the balances of raw materials, supplies, work in process, and finished goods, are matched by a group of detailed ledgers and other underlying records. The capital stock account is a summary of the accounts showing the holdings of the individual stockholders, and in the case of registered bonds the main account is similarly subdivided in the "bondholders' ledger." Other examples might be added, but those given will suffice to suggest the extent to which the general-ledger elements, aside from current receivables and payables, may be accompanied by a scheme of subsidiary ledgers.

The controlling account device is sometimes carried beyond the use of a second level of accounts. Where it is desired to classify types of data in the accounts in considerable detail, and summarize at two or more stages, or from two or more points of view, intermediate controlling accounts are introduced and as a result three or more levels of accounting data are established. For example, a company manufacturing and distributing electric power may use an account entitled "Distribution System" to summarize all asset costs of this general class; this account may be subdivided into a number of second-level accounts such as "Poles, Towers, and Fixtures;" and the subordinate controls may in turn be supported by detail accounts such as "Cross-arms and Braces." The only limit to development along this line is that of expediency, as the system is technically susceptible of any degree of elaboration desired.

Arrangement and Designation of Accounts. In the development of the scheme of general-ledger accounts, as explained earlier, the basic lines of division are those which emphasize the underlying position-statement groups (assets, liabilities, and proprietary equities) and the main sections of the income report (revenues, expenses and taxes, and income charges). Within each group the arrangement may well stress order of use in statement preparation. For the subsidiary ledgers, where the individual accounts are often very numerous (sometimes running into the thousands), the accounts are classified first in terms of such factors as kinds of commodities, departments, plants,

etc. and the individual accounts composing each major section are arranged in alphabetic (or numeric) sequence. For example, the customers' ledger of a mail-order house doing a widespread credit business may be broken up into territorial sections, with the accounts of each section arranged alphabetically by customers' names. Often a separate binder or file is used for each main group of subsidiary accounts, and in some cases the controlling account is similarly subdivided.

The use of a system of numbers as a means of designation and arrangement is especially helpful in organizing the detailed records of such assets as materials or equipment. Under the usual numeric plan a group of numbers, large enough to take care of any probable expansion, is assigned to each controlling account and the corresponding subsidiary ledger. The numbers 1000–1999, for example, may be employed to designate the accounts with raw materials—1000 being the number of the controlling account with 1001–1999 reserved for the supporting records. Through the use of decimals (or by attaching small or capital letters) any desired degree of elaboration can be achieved.

To facilitate efficient handling and proper arrangement of subsidiary accounts loose-leaf binders or files of separate sheets should usually be employed.

Posting Controlling and Subsidiary Accounts. All entries affecting a controlling account must be recorded in the proper subsidiary record as well as in the control. To accomplish this, evidently, such entries must be posted twice, once to the subsidiary account involved and once to the control. This adds to the work of recording, especially if it is assumed that the simple two-column journal is employed as the journalizing medium.

To illustrate, the Smith Tire Co., a concern operating a tire shop and handling several makes and sizes of tires, maintains a controlling account for tires supported by a subsidiary ledger in which shipments received are recorded by make and size. The concern also uses controlling accounts in connection with customers' and creditors' ledgers. On July 19 a shipment is received on account from the United Rubber Co.; the size is 7.00–16 and the amount of the invoice $500. If the two-column journal were used it would be necessary to record this transaction somewhat as follows:

July	19	Tires Control	41	$500 00	
		(United—size 7.00–16) .	28		
		Accounts Payable . .	63		$500 00
		(United Rubber Co.) .	12		

In posting this transaction the debit entry must be charged to the main tires account (general-ledger folio #41) and also to the card or sheet for United–size 7.00–16 (stores-ledger folio #28). Similarly the credit entry must be credited to the controlling liability account (general-ledger folio #63) and to the account with the specific creditor (creditors'-ledger folio #12). It should be noted that while all account titles are displayed in the illustration the debit and credit entries are recorded only once each in the journal columns. It would be necessary to adhere to this procedure if the journal pages were to prove, as in many transactions the duplicate posting would be required with respect to only one side of the entry. For example, if R. B. Wallace, a customer, paid $25 on account the transaction would be journalized by a single debit to the cash account (assuming, as would normally be the case, that there was no subsidiary ledger corresponding to this account), a credit to the controlling account for customers, and a credit to the specific account with R. B. Wallace. It should also be noted that in the form shown above the general-ledger titles are given the prominent position and are in line with the entries in the money columns, while the titles of the accounts in the subsidiary ledgers are subordinated as to position and are shown in parentheses. There is no essential virtue in this procedure and the reverse arrangement might readily be followed.

In practice, fortunately, duplicate posting, item by item, is largely eliminated through the use of the divided-column journal and other summarizing devices. Indeed, the development of controlling accounts naturally accompanies the introduction of improved journalizing media. In later chapters the procedure in this connection is explained. Posting to subsidiary accounts, moreover, is often accomplished directly from invoices, requisitions, and other original documents rather than from columnar journals.

Comparison of Controls and Subsidiary Ledgers. At frequent intervals the condition of the subsidiary ledger should be compared

with the status of the controlling account. If the two records are found to be in agreement it is reasonable to conclude that the transactions involved have been properly posted, especially where the processes of posting to the control and to the subsidiary-ledger, and the computations involved, are in substantial degree distinct and independent operations. If upon comparison the two records are found not to be in harmony, every effort should be made to discover the error or errors and measures should be taken—where possible—to prevent recurrence of the difficulty. These comparisons, and the resulting reconciliations where needed, are an important feature of internal audit and must not be neglected.

The procedure to be followed in comparing controlling and subsidiary data depends upon the occasion and the type of record involved. At the close of the regular accounting period, and particularly in connection with such formal subsidiary ledgers as those embracing the accounts receivable and the accounts payable, the preparation of a schedule of the subsidiary ledger, account by account, may be desirable. After such a schedule is drawn off the footings of the debit and credit columns are calculated and the footings (or their difference) are compared with the respective totals (or the net balance) of the controlling account. See illustrations on pages 166 and 170. At interim dates, on the other hand, it may suffice to take an adding-machine tape of the accounts in the subsidiary record and compare the condition of the ledgers so determined with the condition of the control.

Where two or more general-ledger accounts are used to control a subsidiary ledger—not a very common situation—it is of course necessary to combine the figures for the controls in making the comparison. Suppose, for example, that in a particular case the accounts receivable draw interest under certain conditions and that the interest accruals are regularly entered in the individual accounts of the customers' ledger but are charged in total to a special interest-receivable account in the general ledger rather than to the main control. In this situation, clearly, the figures from the interest-receivable account would have to be included in the computation in proving the subsidiary ledger.

Asset and Liability Balances in Customers' Ledger. In connection with accounts receivable a special complication sometimes arises in comparing the schedule of the subsidiary ledger with the controlling

ROWE COMPANY

Schedule of Customers' Ledger, December 31, 1949

Sheet No.	Customers	Debit Totals	Credit Totals	Debit Balances	Credit Balances
3	Ralph Abbott	$ 450.00	$ 325.00	$ 125.00	
5	D. C. Cook	600.00	625.00		$ 25.00
6	A. L. Dobey & Son	1,600.00	1,450.00	150.00	
7	A. Dombras	540.00	400.00	140.00	
9	W. D. Fernland	250.00	200.00	50.00	
12	Hatton Gasoline Co.	380.00	360.00	20.00	
20	H. A. Rouse	430.00	350.00	80.00	
21	N. A. Sanders		10.00		10.00
23	H. Bruce Spencer	500.00	400.00	100.00	
26	Cyrus Tatlock	300.00	315.00		15.00
27	U. S. Trumbull	790.00	700.00	90.00	
28	Vardon & Smead	1,350.00	1,130.00	220.00	
30	W. T. Williams	15.00		15.00	
32	H. R. Wonder	50.00		50.00	
33	E. E. Wurster	200.00	190.00	10.00	
	Accounts in Balance	2,545.00	2,545.00		
		$10,000.00	$9,000.00	$1,050.00	$ 50.00
	Accounts Receivable—General Ledger				1,000.00
					$1,050.00

account at the close of the accounting period. An open customer's account in the typical case shows an excess of debits over credits. It occasionally happens, however, that due to payments in advance or the granting of special credits in connection with returns or other circumstances, a particular customer's account comes to have a credit balance temporarily. Such credit balances are evidently not receivables and they must be segregated and recognized as a liability in the position statement. Under such circumstances the balance of the controlling account, to which has been posted the equivalent of all entries in the customers' ledger, will be equal to the difference between the liability represented by certain customers' accounts and the asset represented by all the other accounts in this group; that is, the controlling account will be in harmony with the net balance of the customers' ledger taken as a whole, but will not agree with the actual amount of receivables outstanding.

One method of dealing with the situation is to make adjusting entries by which there is charged to the regular controlling account

the amount of the credit balances in particular customers' accounts, the same amount being credited to an account labeled "Advances by Customers," or some similar caption. Then "Accounts Receivable" and "Advances by Customers" taken together can be said to control the customers' ledger, the first account named representing all those accounts in this ledger showing debit balances and the second all the accounts with credit balances. By this means the general-ledger accounts reflect the correct treatment of the customers' ledger for statement purposes.

To illustrate, assume that the controlling account for the customers' ledger of the Rowe Co. at the close of the first period of operation shows total debits of $10,000 and total credits of $9,000, or a debit balance of $1,000. Assume, further, that an examination of the customers' ledger reveals that there are twelve accounts which have debit balances totaling $1,050 and three accounts with credit balances which amount to $50, as shown by the abstract of the subsidiary ledger on page 166. In the position statement at this time, accordingly, an asset balance must be listed for accounts receivable of $1,050 and a liability balance of $50 must appear to cover the credit balances in customers' accounts. The general ledger, however, shows a net balance of $1,000 under accounts receivable. This is correct from an arithmetical standpoint but does not represent the true state of affairs from the standpoint of the position statement. To bring the controlling account into harmony with the actual financial condition as shown by the subsidiary accounts it is therefore necessary to make an adjusting journal entry as follows:

Accounts Receivable	$50	
Advances by Customers		$50

The new account established by these entries is a supplementary control, the details of which appear in the credit balances in the customers' ledger. At the beginning of the next period, having served its immediate purpose, it may be combined with the main control by entries reversing the adjusting entries shown above; another adjustment is then made at the close of the period as conditions existing at that time require. Or it may be allowed to stand unchanged until the end of the period, and at that time be reconciled with the new schedule of customers' accounts showing credit bal-

ances by means of a net transfer from the main control to the liability account (if the total of outstanding credit balances shows an increase over the amount at the beginning of the period) or a net transfer in the other direction (if the total of credit balances shows a decrease).

If the supplementary account is maintained as a continuous record it is usually inexpedient, from the standpoint of efficiency in journalizing and posting, to attempt to record any entries therein during the course of the period. Instead all transactions with customers should be reflected in the regular controlling account, no attempt being made to distinguish between entries resulting in debit balances and those bringing about credit balances until the time comes to prepare another position statement. An exception arises where a special group of customers, as a regular procedure, make payment in advance of delivery. In such cases it may be advisable to maintain an active control for this group of accounts.

If the statement figures are taken directly from a schedule of the subsidiary ledger which segregates debit and credit balances the general ledger may be allowed to stand without adjustment, although this means that the general ledger is then not literally in harmony with the statement. Another possibility is to increase the debit balance of the control and enter the total of the credit balances of the subsidiary ledger as a control credit "balance." By this means the single control does double duty, and no formal adjusting entries are required.

Any clear-cut procedure is permissible which results in a correct statement of the asset and liability elements involved, and by the same token no procedure is proper which introduces any degree of cancellation in reporting basic data.

Debit Balances in Creditors' Ledger. A problem similar to that just discussed often arises in connection with the creditors' ledger and the corresponding controlling account. The typical creditor's account shows a credit balance, or no balance, from time to time throughout its history. Where, however, advances are made on orders, goods are returned for which payment has been made, or special allowances for defects, price changes, or other causes are made by the creditor, the particular account involved may come to have a debit balance, at least temporarily. Such balances represent an asset and at the

close of each period must be segregated and presented on the asset side of the position statement, while all of the accounts with creditors which exhibit credit balances must of course be shown, at least in summary form, as liabilities.

To illustrate, assume that the controlling account for the creditors' ledger of the Rowe Co. at the close of the first period of operation shows total debits of $7,500 and total credits of $9,500, or a credit balance of $2,000. Assume, further, that a tabulation of the subsidiary ledger (see following page) discloses the fact that there are eight accounts with credit balances totaling $2,200 and two accounts with debit balances amounting to $200. The ledger shows, in other words, liabilities amounting to $2,200 and a special asset of $200, and this condition must be reflected in the position statement. To bring the controlling account into harmony with the situation from a statement standpoint, and thus avoid the error which would result from using the unadjusted controlling account in the trial balance as a basis for the data of the statement, adjusting entries may be made as follows:

Advances to Creditors	$200	
Accounts Payable		$200

As a result of this adjustment the controlling account, "Accounts Payable," shows a credit balance of $2,200, and thus matches the total of the credit balances of the eight accounts referred to, and the supplementary control "Advances to Creditors" represents—in the general ledger—the sum of the two debit balances.

With the opening of the following period the adjusting entries may be reversed, in which case a new adjustment is made at the end of the period as circumstances require; or, if the original entries are allowed to stand the next adjustment covers the amount of the net change.

For suggestions as to alternative procedures see preceding discussion of the handling of the customers' ledger.

Controlling Accounts and Trial Balance. Where controlling accounts are in use care must be taken to insure that no entries are incorporated in the trial balance in duplicate. It would be possible to include all subsidiary accounts in the trial balance and omit all controls, but the more satisfactory procedure is to include the con-

ROWE COMPANY
Schedule of Creditors' Ledger, December 31, 1949

Sheet No.	Creditors	Debit Totals	Credit Totals	Debit Balances	Credit Balances
1	Baxter Co.	$1,200.00	$1,500.00		$ 300.00
2	Coast Power Co.	150.00	300.00		150.00
4	A. J. Fox	1,500.00	2,200.00		700.00
7	Innes Mfg. Co.	100.00		$ 100.00	
8	Lyons and Minter	600.00	800.00		200.00
9	Racine Mills, Inc.		200.00		200.00
13	Saginaw Co.	500.00	900.00		400.00
17	Tetrick Co.	150.00	50.00	100.00	
18	Williams Co.	2,000.00	2,100.00		100.00
20	O R. Wilson	700.00	850.00		150.00
	Accounts in Balance	600.00	600.00		
		$7,500.00	$9,500.00	$ 200.00	$2,200.00
	Accounts Payable—General Ledger			2,000.00	
				$2,200.00	

trolling accounts and exclude the detailed accounts from the trial balance proper. As already indicated, however, a schedule of each special ledger must be prepared and compared with the corresponding master account, and if the two records are inconsistent—which means that errors are involved either in the summary or in the detailed accounts (or in both)—the mistakes must be located and a reconciliation effected before proceeding further.

Where both debit and credit totals are shown in the trial balance, instead of debit and credit balances, this often means that individual accounts are being included, as an element in the control, which are "in balance," or which are not "open," at the time the trial balance is taken. In the illustration of a schedule of accounts receivable, for example, it was necessary to include debit and credit totals for the accounts in balance in order to effect a complete reconciliation with the debit and credit footings of the controlling account. These figures might be omitted, evidently, were it desired simply to show in detail the net balance of the controlling account. Completely inactive accounts—that is, accounts which had no balance at the beginning of the period and in which no entries have been made during the period—are of course excluded, as such accounts have no effect upon the current status of the controlling account.

It may be noted that a schedule of subsidiary ledger balances, com-

pared with the controlling account, is often referred to as the "trial balance" of the subsidiary ledger.

Form of Subsidiary Ledger Accounts. The standard form of ledger account illustrated in the preceding chapter, with minor modifications as desired, is satisfactory for the subsidiary ledger in some cases.

Where it is desired to strike balances frequently, and to emphasize the amount of the balance, a convenient type of ledger page is one which is ruled in essentially the same manner as the two-column journal, with the addition of a column for balances. See the illustration below. This type of sheet provides more space for explana-

Date	Explanation	JF	Dr.	Cr.	Balance

tions than is usually needed, although this may be a convenience where an itemized statement of account, to be mailed to the customer, and the ledger sheet, to be retained as the individual account, are prepared on the typewriter or other machine by a single operation. It is sometimes objected to on the ground that in providing but one date column, and thus requiring the use of an entire line across the page for each entry, it is not economical of vertical space.

By omitting or contracting the explanation column the journal type of ledger form can be readily ruled in such fashion that each sheet does double duty, as is suggested by the example shown below. This type of form is also very satisfactory for general-ledger purposes

Date	Memo	Ref.	Dr.	Cr.	Bal.	Date	Memo	Ref.	Dr.	Cr.	Bal.

in many cases, although when used in this connection the retention of the "balance" columns is not essential.

In addition to space for name and address and columns for date, source of entries, charges, credits, and balance, forms used for customers' ledgers often provide for such details as invoice numbers, credit rating, credit limit, territorial or other classification, name of salesman or method of selling, etc. The form shown below, adapted from that employed by a large company which uses machine methods of billing and posting, illustrates some of these features.

Name	*H. B. Warren*	Rating	*A1*
Address	*827 Golden Gate Ave.*	Limit	*$1,000*
	Piedmont, Cal.	Territory	*East Bay*

Date	Source	Salesman	Charges	Credits	Balance	Memo
1/1/49					*240*	
1/10/49	*Inv. E178*	*Wilbur*	*160*		*400*	
1/25/49	*Inv. E364*	*Wilbur*	*130*		*530*	
1/31/49	*Rem. Sheet*			*450*	*80*	
1/31/49	*Cr. Memo*			*50*	*30*	*Returns*

Highly specialized types of cards and sheets are often employed for accounts receivable and accounts payable. The form on page 173 illustrates a type of sheet used by some apartment hotels which prepare itemized statements of account weekly and use copies of such statements for the individual accounts. Each of the seven money columns in this form is used to record the charges of one day. It should be noted that this form provides for determining any balance unpaid, to be forwarded to the next sheet, without the use of a special vertical column for collections.

In stores ledgers and equipment ledgers a wide range of technical forms are employed.

Horizontal-Line Forms. The use of a single horizontal line on a page or sheet, appropriately divided vertically, as the individual account, is a distinctive subsidiary ledger development, and deserves special comment. This type of record, sometimes referred to as the "progressive" ledger, can be employed to greatest advantage in handling lists of names with respect to which regular periodic

FAIRFAX HOTEL
Buffalo, N. Y.

No. *1278*	Room *625* Change ___
	Rate *5.00* Rate ___
	Date *12/4/49* Date ___
Mr. *R. G. Hertler*	Clerk *R.N.S.* Clerk ___

Acc't Forward from No. To No. All Bills Due When Rendered

Date	*12/4*	*12/5*	*12/6*	*12/7*	*12/8*	*12/9*	*12/10*
Bal. For'd		*9*	*16*	*26*	*36*	*48*	*59*
Room	*5*	*5*	*5*	*5*	*5*	*5*	*5*
Restaurant	*3*	*2*	*3*	*4*	*4*	*3*	*4*
Valet						*1*	*1*
Telephone							*1*
Total	*9*	*16*	*26*	*36*	*48*	*59*	*72*
Credit							*72*
Bal. For'd	*9*	*16*	*26*	*36*	*48*	*59*	

charges or credits (or both) must be recorded. The names are written at the left of each sheet (and may, for convenience, be repeated at the right margin if the sheet is of unusual width). The remaining space is divided into a succession of main vertical sections, usually in terms of days, weeks, or other periods, and each of these sections is in turn subdivided into money columns and such other columns as are needed. The structure of the individual account, accordingly, is a horizontal cross section of the vertical rulings. Where a bound volume is employed each pair of facing pages is usually treated as a single sheet. Through the use of insert sheets having no margins for names or other introductory data the accounts may be extended for a considerable period without forwarding.

The progressive ledger is sometimes useful as a payroll record, and in handling accounts receivable under special circumstances. It can also be employed to show the status of individual stockholders and bondholders and the accounts of bank depositors. The so-called "bill book" or note register, in which is compiled a record of notes

receivable or notes payable by individual instruments, furnishes still another example of the use of a record of this type.

As a ledger of receivables the form under consideration can be employed particularly by utilities and other concerns which bill regularly for services rendered at fixed rates on a time basis, and by clubs and other organizations in which members are required to meet periodic dues and charges.

Notwithstanding its advantages the use of this type of ledger form is on the wane rather than on the increase. It does not lend itself readily to machine methods, and pen-posted accounts for depositors, stockholders, customers, employees, etc. are rapidly passing out. It is also an inflexible form, as compared with card files or other loose-leaf systems of individual accounts, and this means that it is especially unsatisfactory where lists of names and other conditions are subject to frequent changes.

Single-Column Accounts. Certain types of accounts, notably those covering revenues and expenses, are essentially one-column accounts. With the exception of correcting and closing figures the sales account, for example, has only one class of entries, credits. Similarly most cost and expense accounts, with the limitation noted, contain a single type of entries, debits. This fact makes possible in many cases the use of the single vertical column as the essential account structure, a practice which facilitates the recording and presentation of comparative data for a considerable number of periods in compact and convenient form. The form shown below indicates the type of record through which total sales (or any regularly recurring revenue or cost) may be recorded in terms of particular months for an entire year (the reverse side being used for the period July to December). If desired quarterly cumulative columns may be introduced in such forms.

Account No.
Sheet No.

Day	Ref.	January	Ref.	February	Ref.	March	Ref.	April	Ref.	May	Ref.	June

Records of this comparative one-column type may be employed either as the main accounts for the data involved or to support general-ledger accounts of the ordinary two-column form. In the latter event the general-ledger entries may be derived by transferring the monthly footings of the subsidiary record to the appropriate account. The folio of the account to which the footing is transferred should of course be listed adjacent to the column footing. Or the function of the comparative record may be restricted to that of a subsidiary statistical sheet, matched by a general-ledger account which is regularly posted from underlying documents or journal forms.

Where it becomes necessary to make correcting entries or other deductions in one-column accounts this can be readily accomplished through the use of red ink entries, enclosed entries (thus, 243), or by means of some other special method of designation. In footing a column in which there are deductions such entries must of course be separately aggregated and the total subtracted from the total of all regular entries to obtain the correct column footing.

Questions

1. Define the controlling account. Give an example. When and why is it desirable to use this device?

2. Which is the more essential record in the case of accounts receivable and accounts payable, the controlling account or the account with the specific customer or creditor? Explain. In the case of merchandise which record is the more essential, a summary of merchandise cost or a detailed stores ledger?

3. Indicate the extent of the use of controlling accounts in the large corporation. Illustrate the use of "intermediate" controlling accounts.

4. How should accounts be arranged in the general ledger? Discuss the arrangement and numbering of accounts in subsidiary ledgers.

5. With an illustration show how controlling and subsidiary accounts would be posted from the simple two-column journal.

6. Describe the procedure involved in comparing a subsidiary ledger and the corresponding control. Upon what occasions is such comparison essential? Illustrate the use of two general-ledger accounts to control a single subordinate ledger.

7. Under what circumstances may a liability element appear in the customer's ledger? With an illustration show precisely how such a situation should be dealt with in reconciling the subsidiary ledger and the control. What is the proper treatment, in the position statement, of credit balances in customers' accounts?

8. Discuss the treatment of debit balances in the creditors' ledger.

9. What treatment should be accorded to the subsidiary ledger and the controlling account in the preparation of the trial balance?

10. What is meant by the "journal type" of ledger page?

11. Draw up a form of ledger sheet which you think would be suitable for the stock (merchandise) ledger for a shoe store.

12. Describe the *progressive ledger*. Draw up such a form for use by a small building and loan association in keeping the accounts of members who are making regular weekly payments in connection with their subscriptions for stock.

13. Give examples of accounts which are essentially "one-column" accounts. Describe the use of one-column comparative records as supporting accounts.

X

OTHER FEATURES OF LEDGER TECHNIQUE

Self-Balancing Branch Accounts. Particular branches or offices often maintain self-balancing ledgers which "tie in" with the main scheme of records. Assume, for example, that a division of the M Co., located at some distance from the main office, keeps its own special system of records, including accounts covering branch sales, receivables, cash, etc. In itself such a subdivision of the accounts will not show an equation of debits and credits and to make the system self-balancing, and thus secure the clerical advantages which flow from this feature, a balancing account, "Main Office," is introduced. Similarly in the ledger at the Company's headquarters a balancing "Branch Office" account is employed to cover the net effect of all entries recorded in detail on the books of the branch. Then whenever a transaction involves the records of both offices both parts of the system are kept in balance through the use of the matched balancing accounts.

The procedure may be illustrated by referring to cash transfers. If a check for $1,000 is forwarded from the main office to the branch the transaction is recorded on the general books as follows:

Branch Office	$1,000	
Bank		$1,000

The receipt of such cash by the branch is recorded on the branch books:

Cash.	$1,000	
Main Office		$1,000

Remittances by the branch likewise affect both ledgers. Assume, for

example, that the branch manager sends a check for $1,000 to the main office. The entries on the branch books are:

Main Office	$1,000	
Branch Bank		$1,000

Upon receipt of this remittance the following entries are made at the main office:

Cash	$1,000	
Branch Office		$1,000

Under a scheme of branch accounts as suggested the record of certain types of transactions will be restricted to the branch ledger. Thus a cash sale at the branch would be recorded by a debit to the branch cash account and a credit to branch sales. Similarly a cash payment for office supplies would be booked by a charge to the proper cost account and a credit to branch cash. Separate journalizing media are of course required in recording transactions which are to be posted to branch accounts.

Periodically the accounts of the branch must be taken into consideration by the main office in preparing reports for the enterprise as a whole. For this purpose a trial balance of the branch accounts must be taken and the balancing accounts must be compared and reconciled as of the particular date. The trial balance of the branch may then be consolidated with the trial balance of the home office.

Private Ledger. Another occasion for the segregation of certain ledger accounts into a semi-independent system arises where it is desired that information relative to officers' salaries, profits, dividends, securities owned, etc. be restricted to the owners and one or more trusted employees. This can be accomplished through the separation of the records into "private" and "general" books. All transactions involving confidential data are recorded in the private journal and posted to the private ledger. The private ledger is made self-balancing by the inclusion of a "general ledger" account. The general books, similarly, are kept in balance through the use of a "private ledger" account. Overlapping transactions, as in the case of like transactions in branch accounting, must be recorded in both sets of records. If the account with officers' salaries is kept in the

private ledger, for example, while the cash account is kept in the general books, a cash payment on this account would be recorded in the private records by a debit to the salaries account and a credit to "General Ledger," and on the general books such a transaction would be entered as a charge to "Private Ledger" and a credit to the cash account. The problem of preparing periodic statements under such a system is likewise technically analogous to the handling of branch accounts, although if the general office staff is to be kept in ignorance of results the work of consolidating and preparing adjusting and closing entries must be in the hands of the person or persons charged with keeping the private books.

Under present-day conditions there is little justification for the use of the device of "private" books except, perhaps, in certain types of relatively small enterprises. The reports of leading corporations are now widely distributed and are available to any interested party, and business concerns in general are called upon to furnish detailed information regarding their financial condition and operations for various governmental purposes.

Self-Balancing Subsidiary Ledgers. Through the use of a balancing account any subsidiary ledger, controlled by a general-ledger account, can be made self-balancing. This procedure is particularly desirable where the work of handling the subsidiary accounts is in charge of a distinct person or group, located in a separate office, as it facilitates preparation of a "trial balance" of the ledger as a check on the accuracy of the work of the person or group involved. Assume, for example, that in a particular corporation the accounts of the individual stockholders—the capital stock ledger—are kept by a special staff outside the main accounting office of the company, and that a balancing account, "Capital Stock," is charged with the daily totals of all credit entries to the individual accounts and is credited with the daily totals of all debit entries. With these conditions the subsidiary ledger is periodically "proved" by comparing the total of the balances of the detailed accounts with the net amount of the summary balancing account included in such ledger, and the corresponding controlling account in the general ledger is then verified by comparison with the balancing account.

Offsetting Memorandum Accounts. Situations sometimes arise in which the management desires to give formal expression in debit and

credit entries to supplementary data which cannot be construed—immediately, if at any time—as representing asset or equity elements. In such circumstances, if the books are to remain in balance, it is necessary to introduce mutually offsetting memorandum accounts. For example, if estimated costs not actually incurred (such as interest on proprietary investment) are given recognition by actual entries within the formal accounting structure such charges must be offset—in effect canceled—by memorandum entries on the other side. Memorandum accounts should be employed only to meet compelling practical needs, and where such accounts are used they must be clearly labeled and must be disposed of in such manner as not to disturb the integrity of the financial statements. In general the system of debits and credits should be restricted to the data of the underlying equation, elaborated in accordance with the conditions of operation, the needs of the management, and considerations of clerical expediency, and should not be burdened with supplementary types of information or lines of analysis, regardless of their importance in particular connections.

Mutually offsetting accounts are useful in recording types of receivables which are not deemed to constitute an adequate basis for revenue recognition. See discussion of installment sales in Chapter XXXII.

Clearing Accounts. The clearing account is used wherever it is necessary or desirable to hold an entry (or entries) in a temporary record until final disposition has been determined. One occasion arises where a mixed aggregate of property is acquired for a lump-sum payment. In this situation it is convenient to record the original transaction by charging a clearing account with the total cost, pending the allocation of such total to the appropriate asset accounts. The M Co., for example, pays $140,000 in cash for real estate and personal property consisting of land, building, and equipment. The appropriate entries to record the purchase are:

Cost of Property Purchased	$140,000	
Cash		$140,000

On the basis of a careful appraisal it is estimated that the cost of the property should be classified as follows: land, $50,000; building, $60,000; equipment, $30,000. Accepting these figures the entries necessary to close the clearing account are:

Land	$ 50,000	
Building	60,000	
Equipment	30,000	
Cost of Property Purchased		$140,000

In many cases, of course, a much more detailed assignment of property would be in order.

Losses and doubtful receivables are sometimes held in "suspense" in special accounts, particularly in cases in which the final amount is in question. Where uninsured property is damaged by fire, for example, it is advisable to record the estimated amount of the loss temporarily under a special title; and where the damage is wholly or partly covered by insurance it may still be desirable to employ a suspense account until the terms of settlement, and the amount of book loss or gain, has been determined. The suspense account is also sometimes used to carry the amount of an error or discrepancy until the explanation has been found or final disposition otherwise ordered.

Suspense accounts should be resorted to only where there is genuine need for such a record and at the close of the regular period, if not sooner, it is desirable that all such accounts be closed. To use continuing suspense accounts for the purpose of carrying doubtful asset balances or to avoid making decisions as to the character of particular items is decidedly bad practice.

Contra Accounts—Definition and Use. A further step in the elaboration of the system of accounts, and one which has been carried far in modern practice, is the introduction of what may be called the "contra" account. The contra account is *an account which is used to exhibit, for more or less lengthy periods, special deductions from some main heading*. Such an account, in other words, is employed wherever it is desired to segregate and emphasize some distinctive negative or offsetting factor.

The use of the contra account is not restricted to any particular class of data. The more important examples are found in conjunction with the fixed assets, but contra-equity accounts frequently arise in corporate practice, and almost all enterprises afford instances of the use of this device in connection with current operating accounts. Unfortunately there is a common tendency to misinterpret contra accounts, and in some cases quite improper conclusions are drawn as a result. This is in part due to carelessness in selecting titles and in determining the position of such accounts in the arrangement of the

ledger. To facilitate correct interpretation and sound treatment in the reports, each contra account should be given a title and number which emphasize the relation to the main account which is being modified.

The division of a primary account into a record of typical and ordinary positive and negative entries on the one hand and a record of special deductions or offsets on the other involves no additional principles of account structure or procedure. The use of this device represents nothing more than a special extension of the parallel-column scheme as outlined. In making and interpreting entries in contra accounts, however, care must be taken in all cases to recognize the final effects of such entries upon the parent accounts, and to proceed accordingly.

Contra Asset Accounts. The most important example of the contra asset account is the "allowance for depreciation." The purpose of this account is *to show the estimated expired portion of the depreciable assets,* and its use serves to indicate the conjectural and tentative character of the deduction and also permits the retention of the gross book amounts, undisturbed, in the main asset accounts.

EQUIPMENT—COST

$30,000	

EQUIPMENT—ALLOWANCE FOR DEPRECIATION

	$3,000

For an illustration assume that the M Co. acquires equipment at a cost of $30,000 and that the management decides that the annual depreciation allowance for this class of property should be 10% of cost, or $3,000. Under these circumstances the depreciation for the first year of operation would be recorded, in summary, by a charge of

$3,000 to the proper cost account or accounts and a credit for the same amount to a contra account, "Equipment–Allowance for Depreciation." This credit entry is a substitute, under special title, for a direct credit to the main asset account, and it has substantially the same significance as it would have if it were immediately lodged in such account. In skeleton form the parent account and the contra supplement now stand as shown on preceding page.

As suggested by this example the ideal practice is to use a distinct contra account for each class of depreciable asset recognized in the general ledger.

Having divided the record of equipment into sections in this fashion it is necessary to read the two accounts together in determining the status of the asset. One account shows "gross book value," in this case cost; the supplement exhibits the estimated accrued depreciation to date; the difference between (or the algebraic sum of) the two balances is the "net book value," the amount of asset cost which is assumed to inhere in equipment after use for one year.

Although this type of valuation account has come into almost universal use it is still frequently misinterpreted. This is due in part to the use of the term "reserve" in this connection. The "reserve for depreciation" is sometimes included with appropriations of retained earnings in summarized financial statements, a most unfortunate practice. The amount of accrued depreciation, assuming it to be reasonable, is a contra to asset cost, not an element of proprietorship; it represents–in the form of a suspended credit–that portion of the cost or other basis of property which has been absorbed in operating costs (or losses) to date. It follows that in the position statement the balance of the allowance should not be listed among the equities but should appear as a special deduction on the asset side. The following illustrates the proper procedure:

Equipment:		
Cost	$30,000	
Allowance for Depreciation	3,000	$27,000

When this procedure is followed the statement totals are not padded and the nature of the allowance account is clearly indicated. An alternative method of presentation consists of showing only the net book value in the statement, but this treatment is less informative and hence less satisfactory.

Other examples of contra asset accounts, such as the allowance for bad debts, are similar in technical character to the allowance for depreciation.

Disposition of Allowance for Depreciation. When a unit of property comes to the end of its useful life or is retired from service for any cause, it is necessary to transfer the tentative credit, in so far as applicable to the unit under consideration, to the main asset account. This is accomplished by a debit to the contra account, which cancels the preliminary credit, and a credit to the main account, which recognizes the decrease in value in final form. The total credit to the main account when the asset is disposed of is of course the amount of the gross book value, and under ideal conditions this would exceed the accrued depreciation to date by precisely the amount of the net proceeds, if any, realized upon the disposition of the asset. In practice, as would be expected, such a situation is seldom if ever found, which means that an adjustment involving recognition of loss or gain is usually required.

A company, for example, bought a unit of equipment as of January 1, 1946, at a total cost, installed, of $5,000. The expected life is five years and it is assumed that no net amount will be recovered upon retirement. The unit is retired as of the beginning of business on January 1, 1950, after four years of use, and the amount realized upon the sale of the old asset is $100, cash. At this point the allowance for depreciation shows a credit of $4,000 (depreciation for four years at 20% of cost per annum). The proper entries upon retirement therefore are:

Cash	$ 100	
Equipment—Allowance for Depreciation	4,000	
Retirement Loss	900	
Equipment—Cost		$5,000

The special loss account in this situation logically represents a charge to accumulated earnings (if any) rather than an expense or loss of 1949. However, retirement losses (or gains) are a normal feature of business activity and hence it may be expedient to report them as revenue deductions (or credits), except under unusual circumstances.

Contra Equity Accounts. Where a security is issued at a discount and it is deemed desirable to present par or face amount in the ac-

counts, a special contra account is needed to show the difference between such nominal value and the true initial value. For example, if the M Co. issues capital stock with a formal authorized value of $150,000 for $135,000 in cash, the effects upon the accounts, in summary, would be a debit to the cash account of $135,000, a debit to "Capital Stock—Discount" of $15,000 and a credit to "Capital Stock—Par" of $150,000. "Capital Stock—Discount" is evidently a contra account; it exhibits an offset to a nominal equity valuation. The true measure of the stockholders' initial equity or investment, $135,000, is found by combining the two accounts. The relation between the contra supplement and the main equity account can be indicated as follows:

CAPITAL STOCK—PAR

	$150,000

CAPITAL STOCK—DISCOUNT

$15,000	

Security discounts are often listed with the assets on the asset side of the statement or, worse, are buried in the form of overvaluation of ordinary assets. This is very unsatisfactory accounting, as the result is a misstatement of each of the fundamental classes of data, an inflation of statement totals. The proper treatment is to exhibit discount as a deduction on the equity side, as follows:

Capital Stock:		
Par	$150,000	
Discount	15,000	$135,000

Securities held in the "treasury" of the issuing corporation are in some cases charged to special suspense accounts, instead of being deducted directly from the main equity accounts. Actually such items are contra equity accounts, and should be treated accordingly.

As in the case of other suspense accounts it is desirable to make a final disposition of the amount involved at the end of the accounting period.

Another example of the contra equity account arises where a deficit resulting from operating losses or from other causes is retained for a time as a separate debit balance. Such a balance is an offset to the proprietary capital account, assuming that no element of retained earnings remains. The inclusion of a deficit on the asset side of the position statement, formerly a not uncommon practice, is decidedly objectionable. It may be added that if the proprietary equity has been completely extinguished any remaining deficit balance is an offset to the recorded claims of creditors. A business enterprise in such a condition is of course definitely insolvent.

Current Contra Accounts. Contra accounts of a current character are often employed, particularly in recording adjustments of costs and revenues. A familiar example is the account with sales discounts. Where alternative terms of settlement are offered to credit customers it is a common (although not necessarily desirable) procedure to credit sales with the gross amount of each bill. Then when a customer pays the net amount the discount taken is charged to a special account. Assume, for example, that the M Co. makes a sale to a particular customer amounting to $1,000, gross, and subject to a discount of 2% if paid in ten days, and that before the discount period lapses the customer pays in full by giving his check for $980. Under the gross-price treatment the original transaction would be recorded by a charge of $1,000 to the customer's account (and to the

SALES—GROSS

	$1,000

SALES—DISCOUNT

$ 20	

account controlling the customers' ledger) and a credit to the sales account of the same amount, and the collection would be recorded by a charge to the cash account of $980, a debit to a discount account of $20, and a credit to the customer's account (and to the control) of $1,000. The special discount account used in this case should be viewed as a contra to the main sales account. The skeleton accounts on page 186 indicate the relationship.

In the income statement sales discount may be reported as suggested by the following:

Gross Sales	$xxx	
Discount	x	
Net Sales		$xxx

An alternative procedure, acceptable in most cases where condensed reports are in order, is the showing of net sales only.

Contra accounts are likewise often used to record rebates, special allowances, returns, and other adjustments arising in connection with purchases and sales. These matters will be dealt with more fully in later chapters.

Adjunct Accounts. In connection with certain accounts it is often deemed advisable to segregate particular positive elements. Special accounts used for this purpose are, like contra balances, sometimes referred to as valuation accounts, but the term "adjunct" is more appropriate and will be used here. An adjunct account may be defined as an account which shows under a special heading, on a separate ledger sheet, a distinctive positive factor attaching to some main title.

The use of adjunct accounts is common in connection with the recording of corporate equities, and the most important examples are associated with capital stock and retained earnings. Where capital stock is issued for an amount in excess of the par or stated value it is customary to credit such excess to a special account entitled "premium on capital stock" or "capital surplus," and such an account can best be interpreted as supplementary to the main capital stock account. Another case arises where capital stock is issued with special rights or warrants attached, and the value attributable to such rights or warrants is set up in a special account. Even the retained earnings account can be viewed as an adjunct to capital stock, although the amount of such earnings has some independent significance as an element of corporate proprietorship.

The retained earnings account, in turn, is often supplemented by special "reserve" accounts which represent appropriations or segregations of earnings made, as a rule, upon the authority of the board of directors, and designed to reflect some particular condition or policy. Such accounts constitute adjuncts to the retained earnings and should be treated accordingly in ledger arrangement and in the preparation of statements. Credit balances arising through the revaluation of assets to recognize appreciation are also usually deemed to attach to the "surplus" component of proprietorship. There is a question, however, as to the reasonableness of this interpretation of equity adjustments resulting from appraisals. To the extent that appreciation of assets reflects primarily the movement in the general level of prices it can be urged that the change in the proprietary equity caused by the recognition of the increase in values is more accurately viewed as an adjunct to capital (or to the total equity as otherwise determined).

Where bonds and other contractual equities are issued at a premium the amount of the premium is usually shown on the issuer's books in a special adjunct account. Assume, for example, that the R Co. issued bonds with a par or maturity amount of $100,000, and that in view of a high interest rate offered and other conditions the amount received for the bonds totaled $105,000. This transaction would be recorded, in summary, by a charge to the cash account of $105,000, a credit to "Bonds Payable—Maturity Amount," of $100,000, and a credit to "Bonds Payable—Premium" of $5,000. The close relation between the supplementary liability account and the main bonds account is suggested by the following:

BONDS PAYABLE—MATURITY AMOUNT

	$100,000

BONDS PAYABLE—PREMIUM

	$ 5,000

The premium account in this case is an adjunct to the principal liability account and should be dealt with accordingly throughout the life of the security in question.

The purchaser of stocks and bonds often does not distinguish in his records between par or face amounts and premiums paid. However, where such a distinction is drawn on the holder's books the supplementary accounts used can be viewed as adjuncts to the main investment accounts.

Adjunct accounts in the strict sense are not often found in connection with asset and cost accounts. Nevertheless supplementary asset accounts are sometimes employed which are closely allied to the typical adjunct accounts. Interest receivable, for example, is usually charged to special accounts, rather than to the accounts which show the principal values of the notes and other claims on which the interest is accrued. Another illustration arises where freight and other charges on merchandise are debited to a supplementary account rather than to the main merchandise account. A special asset account used to record an increase in the value of property determined by appraisal may also be viewed as an adjunct account.

Questions

1. With a simple illustration explain the use of balancing accounts in maintaining a self-balancing system for a branch establishment. What is meant by "overlapping" transactions in this connection?
2. What is the purpose of the "private ledger"? Why is this device of slight general value under present conditions?
3. Illustrate the use of the self-balancing subsidiary ledger.
4. Why must "memorandum accounts" be mutually offsetting?
5. Define the "clearing account." Give several examples of its use. Why should such accounts be used sparingly?
6. Define the "contra account." Indicate the importance of proper selection of titles and proper location in the ledger where such accounts are used.
7. What is the outstanding example of the contra asset account? Outline its purpose and use.
8. What improper treatment is sometimes accorded the "reserve for depreciation" in the position statement? Illustrate the correct treatment.
9. Illustrate the use of the allowance for depreciation in connection with the retirement of fixed assets.
10. Give an example of the contra equity account and illustrate the correct treatment in the position statement.
11. Explain the use of the sales discount account and the relation of this account to the income statement.
12. What is meant by an "adjunct" account? Illustrate.

XI

ELABORATION OF GENERAL JOURNAL

Reasons for Journal Development. The desirability of abridging the work of posting to the ledger is an underlying consideration in the development of the journal. Posting from the simple two-column journal must be accomplished entry by entry, and this is obviously a laborious and time-consuming process. In the construction of more elaborate journal forms, accordingly, care must be taken to make provision for the reduction of the work of posting to a minimum. As will be explained shortly, the subdivision of journal columns is a device which makes it possible to transfer the bulk of the entries from the journal to the ledger in aggregates, with a consequent marked saving in the time required to post.

In this connection, too, attention should be directed again to those technical considerations bearing upon the need for bookkeeping devices which were referred to in Chapter III. The elaboration of the journal—through the use of special columns and also through the development of distinct journals, each of which is devoted to a particular class of transactions—facilitates the classification of data for managerial purposes and makes the journal itself a valuable record of current operations. The use of specialized journalizing media is likewise required, in the large enterprise, in order that a staff may be employed large enough to handle the many transactions which arise. Specialized journals are also helpful in the development of a scheme of records and procedures with a corresponding division of labor—a system of "internal check"—which will tend to prevent carelessness, inaccuracy, and peculation.

Subdivision of Journal Columns. The simple journal, as is shown in the illustration on page 118, has two money columns, one for

debits and one for credits. The first step in the elaboration of the journal is the subdivision of these columns. Either column or both columns may be expanded and divided into a number of subsidiary columns, each of which is headed by the *name of a particular account.* The essential nature of this feature of journal development is indicated by the form shown below.

Date	Accounts and Explanations	LF	Debit Columns					Credit Columns				

In this scheme each of the fundamental columns is divided into five parts or sections. There is no special virtue, however, in this particular structure. Any desired number of subsidiary columns may be introduced, and the number of such columns under each main division need not be the same. These matters are determined by the conditions of the particular case.

The subdivision of journal columns has two main purposes. By this means, in the first place, entries affecting active accounts may be segregated in particular columns and posting to these accounts may then be effected by column totals rather than by individual entries. Second, this device makes possible preliminary classification of important groups of data.

Incidentally the use of the special column, with the resulting practice of posting by column totals, renders the ledger accounts affected more compact, and thus facilitates the work of footing and balancing.

Selection of Special Columns. In the selection of the accounts for which special journal columns are to be provided the controlling consideration is the *activity of the account.* That is, special columns can be used to advantage only for accounts which are affected by numerous transactions from day to day. The cash account—broadly defined—is for many concerns the leading example of the active account. All cash sales and collections from customers require debits to cash. Cash purchases of goods and services and all payments of liabilities involve credits to cash. And these events make up a large

part of the volume of regular business transactions in many enterprises. It follows that in subdividing the basic journal columns provision must be made for both debit and credit cash columns. Moreover, since the record of cash is regularly divided in the ledger into at least two distinct accounts—the account with actual cash and the bank account—a total of four special columns is required in this connection.

The controlling accounts for the customers' ledger and the creditors' ledger are commonly very active accounts, often standing next to cash in this respect. The former is charged with the amount of all sales on account and is credited with all collections; the latter is charged with all payments and credited with the amount of all goods purchased on account. The divided-column journal should therefore be provided as a rule with debit and credit columns for each of these accounts.

The development of the device of the special column makes it possible, with little additional effort, to use controlling accounts for all important groups of active accounts. That is, in so far as it is feasible to devote a special column in the journal to each such account controlling accounts may be maintained in the general ledger without any considerable increase in the work of posting.

The sales account, or other principal revenue account, is another active element found in all enterprises. This account, however, is essentially a one-column record; aside from adjusting and transfer entries there are no debits to sales. This means that but one sales column, a credit column, is invariably required in the journal. However, where sales are departmentalized in the ledger a special journal column can be used to advantage for each active revenue division.

Likewise the account to which are charged the costs of merchandise or raw materials should ordinarily be represented by a special column. In this case a debit column is most needed. Aside from the question of allowances or other adjustments a credit column for merchandise or materials would be required only where the cost value of goods sold or utilized were being calculated from day to day and regularly journalized. As in the case of sales, where merchandise or material costs are classified in the accounts according to main departments it may be feasible and desirable to provide a column in the journal for each such department.

Accounts with other current costs than merchandise or materials

are often sufficiently active to justify the use of special journal columns. Labor costs, for example, may be segregated in one or more columns, and the same is true of many types of production, selling, and general administrative charges. The question of the use of a special column in any case is purely a matter of the frequency with which entries in the account involved are required under the conditions and procedures in effect. The number of cost columns (or of special columns in general) which can be employed to advantage will naturally vary with the nature and size of the enterprise.

Need for Unclassified Columns. That it is not expedient to set up one or more special columns for every account in the ledger requires emphasis. Even the very small enterprise commonly makes use of from twenty-five to one hundred accounts (in addition to the accounts of individual customers and creditors and other subsidiary-ledger accounts), and in the large enterprise the general ledger may embrace as many as several hundred distinct accounts. A journal with special columns for all accounts is accordingly out of the question. Aside from the fact that any such book would be unwieldy, the use of a very large number of columns in the journal would increase rather than decrease the work of the bookkeeper. That is, in using an unduly extended journal more effort would be required in picking out the columns affected by the particular transaction and in footing columns containing but one or two items than could be saved by posting column aggregates instead of individual entries. In fact, if special columns were used for all accounts in the ledger a majority of the columns would doubtless contain no entries whatever on the typical journal page.

It follows that the elaborated journal form must include a pair of unclassified columns to take care of all entries affecting the relatively inactive accounts for which no special columns have been provided. The divided-column journal, in other words, consists essentially of two parts: (1) the simple journal of two columns, one for unclassified debit entries and the other for unclassified credits; (2) a number of special debit and credit columns in which are registered all entries affecting the active accounts with whose names these columns are headed. The unclassified columns constitute, in the expanded journal, what is left of the simple, two-column form. Further, all entries in the unclassified columns are posted item by

item; it is only in the posting of the totals of the special columns that the clerical labor of transferring journal entries to the ledger is curtailed.

Structure of Divided-Column Journal. Although many variations are possible with respect to the technical structure of the divided-column journal, the essential features of this type of journal page can be readily listed. In the first place a reasonably "tall" page should be provided; the vertical columns should be of such length as to make it possible to accumulate a considerable number of entries in each column on each page. This is important even if the posting unit for the special column is the total for a period rather than the total for a page, as frequent forwardings are to be avoided and neglecting to take page footings is not to be recommended. Second, provision must be made for a clear-cut display of both general-ledger and subsidiary-ledger account titles (or numbers). Third, the ledger-folio column or columns must be introduced, and in such manner as to facilitate listing of references to all types of ledgers employed. Fourth, as in the case of the simple journal space must be made available for dates and explanations or supporting references to underlying documents. Fifth, the appropriate special columns, properly headed, should be provided for all highly active accounts in the general ledger. Finally, there must be included a pair of unclassified columns to take care of entries in the relatively inactive accounts as explained above.

With respect to order of columns and other details of construction the controlling consideration, as in the case of other bookkeeping devices, is that of clerical efficiency. One arrangement begins with date space, with space for account titles and explanations, folio column, debit money columns, and credit money columns following in order from left to right. (See illustration on page 196.) Under another scheme the debit money columns are placed at the left of the page and are separated from the credit money columns by date space, etc. This make-up has the minor advantage of emphasizing the distinction between debit and credit entries. The internal order of columns in the two groups of money columns is not a very important matter. The unclassified columns may be given either first or last position and the remaining columns in each group may well be arranged from left to right in order of activity. Where both debit and credit columns are employed in connection with a particular

account, as in the case of cash, it is desirable that each column be in the same relative position in its group.

Another and quite distinct form of arrangement is found in the "account" type of special-column journal. In this form the debit and credit groups of money columns are broken up and arranged in pairs in so far as this is possible. (An illustration is shown on pages 200–201.)

Divided-Column Journal Illustrated. The example given on page 196, which represents an assumed journal page or sheet after the columns have been footed and posting accomplished, illustrates the essential features of the divided-column journal. In this arrangement the general structure of the two-column journal is followed closely, for the purpose of emphasizing the relationship between the elaborated journal and the simple form. In order to conserve vertical space, however, the account titles and explanations are not set up in the form outlined in Chapter VII. By suppressing in the individual entries those account titles for which special columns are available, and by reducing supporting data to a bare reference to underlying documents or other sources, the space required to record the typical transaction is reduced to a single line.

For many situations a means of increasing the usefulness of the particular journal page, and thus rendering the special-column device more effective, is to record certain types of transactions by groups in summary form. Thus cash sales for a particular day, as determined from cash register readings or otherwise, may be journalized as a single transaction. This process of preliminary summarization, moreover, can be extended to groups of transactions affecting subsidiary ledgers provided arrangements are made to post to the individual accounts from underlying documents rather than from the journal. If charges to particular customers' accounts, for example, are posted directly from the invoices, the charges for a given day (or longer period) may be recapitulated and journalized as a single transaction. In this example, however, it is assumed that the individual sales, purchases, etc. are for substantial amounts and are relatively few in number from day to day, and hence may reasonably be journalized in terms of specific transactions.

It should be understood that the cost invoice numbers given in the reference column of the illustration represent a series attached by the buyer and not the original numbers used by the vendors.

Date		References	Accounts	LF	Cash Debit	Commerce Bank Debit	Accts. Receivable Debit	Accts. Payable Debit	Merchandise Debit	Unclassified Debit	Cash Credit	Commerce Bank Credit	Accts. Receivable Credit	Accts. Payable Credit	Sales Credit	Unclassified Credit
1949 July	5	Cost inv. #362	Kyer & Watson	38					1,000 00					1,000 00		
		Advance—ord. #101	A. B. Stowe Co.	59	500 00								500 00			
		Sales inv. #395	H. O. Bryson	15			500 00								500 00	
		Cost inv. #363 }	Delivery Equip.	81						1,000 00						
		6%, 60 days }	Notes Payable	150												1,000 00
		Deposit slip		✓		500 00					500 00					
	6	On acct.—inv. #380	L. D. Kerr	36	300 00								300 00			
		Ck. #280—inv. #356	Kyer & Watson	38				1,200 00				1,200 00				
		On acct.—inv. #378	Budd & Emsley	16	350 00								350 00			
		Deposit slip		✓		650 00					650 00					
	7	On acct.—inv. #382	Barker & Wines	11	200 00								200 00			
		Cost inv. #364	General Mill Co.	31					500 00					500 00		
		Inv. #365—ck. #281	Office Supplies	54						150 00		150 00				
		Sales inv. #396	L. D. Kerr	36			200 00								200 00	
		Sales inv. #397	Barker & Wines	11			400 00								400 00	
		Sales inv. #398	J. B. Cox	19	100 00										100 00	
		Deposit slip		✓		300 00					300 00					
		Ck. #282—inv. #362	Kyer & Watson	38				1,000 00				1,000 00				
		Ck. #283—inv. #360	General Mill Co.	31				600 00				600 00				
		Sales inv. #399	Budd & Emsley	16			300 00								300 00	
	8	Cost inv. #366	General Mill Co.	31					1,300 00					1,300 00		
		On acct.—inv. #395	H. O. Bryson	15	500 00								500 00			
		On acct.—inv. #393	R. J. Rouse	49	300 00								300 00			
		Postage	Office Supplies	54						20 00	20 00					
		Sales inv. #400	L. D. Kerr	36			600 00								600 00	
		Ck. #284—Ajax Co.	Insurance	58						100 00		100 00				
		Cks. #285–287, Payroll	Office Salaries	245						200 00		200 00				
		Sales inv. #401	A. B. Stowe Co.	59			900 00								900 00	
		Cost inv. #367	Kyer & Watson	38					500 00					500 00		
		Deposit slip		✓		780 00					780 00					
					2,250 00	2,230 00	2,900 00	2,800 00	3,300 00	1,470 00	2,250 00	3,250 00	2,150 00	3,300 00	3,000 00	1,000 00
					(1)	(30)	(40)	(120)	(50)	✓	(1)	(30)	(40)	(120)	(300)	✓

Proving the Divided-Column Journal. The divided-column journal, like the simple journal, should always be proved before posting, so that errors may be discovered and rectified before they are perpetuated in the ledger. Proving a journal page, or group of pages, of the form shown on page 196, consists essentially of the taking of a "trial balance" of the journal. That is, to test the equilibrium of debits and credits, it is necessary, first, to foot all money columns, including the unclassified columns, and, second, to calculate the grand total of the debit footings and the grand total of the credit footings and compare such totals. And if it is desired to emphasize the journal proof and maintain a record thereof, a schedule of the column footings may be drawn up in trial-balance form. The following represents a schedule of footings for the illustrative journal page shown on page 196.

	Dr.	Cr.
Cash	$ 2,250	$ 2,250
Commerce Bank	2,230	3,250
Accounts Receivable	2,900	2,150
Accounts Payable	2,800	3,300
Merchandise	3,300	
Sales		3,000
Unclassified	1,470	1,000
	$14,950	$14,950

It is noticeable that the footings of the cash columns are equal. This is due to the fact that daily deposits are in each case the equivalent of receipts (aside from the outlay of $20 in actual cash on July 8). Under the circumstances the footings of these columns might be omitted from the proof.

Where posting is deferred to the close of the month, which makes it unnecessary to take footings for posting purposes before the end of the period, it is nevertheless good practice to foot and prove each journal page used and to forward the footings to the proper columns on the next sheet. This procedure is not only advantageous from a clerical standpoint but it also serves to furnish intermediate totals of important business data.

Again it should be pointed out that in the case of journal entries prepared by machine methods the proof is a continuous feature of the entire process.

Posting from Divided-Column Journal. In general the work of posting from the divided-column journal consists of three distinct operations or phases. First, all special columns are posted by column totals. Second, all entries in the unclassified columns are posted item by item as in the case of the simple journal. In the third place all entries in special columns which correspond to subsidiary ledgers must be posted item by item to the specific accounts affected in such ledgers. The third operation is not required in those cases in which posting to subsidiary ledgers is accomplished from underlying documents and the transactions involved are journalized in summary form in terms of controlling accounts only.

In the illustration on page 196, for example, the periodic footing of each special column is posted in total to the appropriate account, the ledger folio being indicated below the footing in each case. The entries in the unclassified columns (five debits and one credit in this case) are posted individually to the proper accounts in the ledger, the ledger numbers involved being listed in the "LF" column on the occasion of posting. Further, in this example all entries affecting the accounts of customers and current creditors (of which there are nineteen) are likewise posted individually to the appropriate accounts in the subsidiary ledgers, the ledger folios again being recorded in the journal to indicate that posting has been accomplished and to link the books for future reference. The footings of the unclassified columns, which must be taken in the process of proving the journal, are distinguished from the special-column footings, which require posting, by means of check marks ($\surd$).

Where customers' and creditors' accounts are arranged alphabetically in the subsidiary ledgers (as is usually the case) the name alone may be deemed to furnish an adequate means of ledger reference in the journal. In other words the listing of page or sheet numbers for such accounts in the journal may be dispensed with under some conditions. In this event (and still assuming that entries to the specific subsidiary accounts are posted via the journal) the process of posting can be indicated by the use of check marks. (See illustration on pages 200–201.)

Several references have been made to the possibility of posting subsidiary ledgers from underlying documents. In general this practice should be followed in all cases where the transactions affecting the accounts of subsidiary ledgers are very numerous from day to day and involve relatively small amounts. If, for example, there are a

large number of customers and there are many charges and credits to customers' accounts during the typical day's business it is advisable to work out a system of posting to individual accounts directly from sales invoices and other original sources. This procedure makes it possible to journalize in summary, in terms of controlling accounts, with a consequent greater use of the columns on the typical journal page. Another advantage of this method lies in the fact that the periodic comparison of the controlling account and the schedule of subsidiary ledger accounts affords a more significant test of bookkeeping accuracy if the two records are compiled through independent operations. Where, on the other hand, an enterprise makes but one or two large credit sales per day, and the receipts from customers are correspondingly few and important in amount, it may be expedient to journalize each individual transaction with customers and to post to the individual accounts from the journal.

The manner in which the example on page 196 is posted indicates either that no subsidiary merchandise or stores ledger, supporting merchandise cost, and no detailed classification of sales, supporting the sales account, are in use, or that such records are being posted or prepared independently from the appropriate invoices and other underlying papers. It is assumed, further, that no subsidiary ledgers are employed with respect to the entries in the unclassified columns, or that if such ledgers are present duplicate posting is avoided by posting to the subsidiary accounts from underlying documents rather than from the journal. If it is desired to post a transaction which affects an inactive controlling account to both subsidiary and general ledgers from the journal it is necessary to list the title or number of each subsidiary account involved as well as that of the control, and to take care that the amount posted to the control is also recorded in the subsidiary account or accounts—a rather awkward procedure.

While there is something to be said in favor of the practice of footing and proving each page of the journal as soon as the page is filled, it is standard practice to forward cumulative footings and to postpone posting of column totals to the end of the month or other period selected. In any event it is usually unwise to defer posting to individual customers' and creditors' accounts for any considerable period, as information as to the status of the particular account may be required at any time.

The labor-saving character of the special column device is sug-

General Ledger		Creditors' Ledger		F	Accounts	Date	References
Dr.	Cr.	Dr.	Cr.				
						1949 July 5	Register reading
200 00				54	Office Supplies		Invoice #189
			200 00	√	West & Co.		
							Sales report
							Remittance sheet
			850 00	√	L. O. Reed		Invoice #190
		2,250 00		√	Smith & Co.		Check #162—inv. #178
							Deposit slip
						6	Register reading
	2,000 00			150	Notes Payable		Note reg.—deposit
		3,575 00		√	Adams Co.		Check #163—inv. #179
25 00				54	Office Supplies		Postage
							Sales report
							Remittance sheet
							Deposit slip
						7	Register reading
							Sales report
							Remittance sheet
			1,200 00	√	Alexander Co.		Invoice #191
300 00				88	Store Equipment		Invoice #192
			300 00	√	Travis Co.		
							Deposit slip
						8	Register reading
							Sales report
							Remittance sheet
			2,000 00	√	Adams Co.		Invoice #193
			600 00	√	L. O. Reed		Invoice #194
25 00				231	Advertising		Printing—Elite Co.
200 00				243	Office Repairs		Check #164
							Deposit slip
						9	Register reading
							Sales report
							Remittance sheet
		200 00		√	West & Co.		Check #165—inv. #189
		1,500 00		√	Smith & Co.		Check #166—inv. #180
300 00				245	Office Salaries		Payroll—Cks. #167–173
750 00				255	Store Salaries		Payroll—Cks. #174–195
							Deposit slip
1,800 00	2,000 00	7,525 00	5,150 00				
√	√	(120)	(120)				

gested by the illustration on page 196. The number of postings required if the simple, two-column journal were used, and the controlling accounts for the customers' and creditors' ledgers were retained, would be seventy-seven (two postings for each of the nineteen items affecting accounts receivable and accounts payable, and one posting for each of the remaining thirty-nine entries), while the number of postings required with the form employed is only thirty-five (ten postings for column footings, six for unclassified entries, and nineteen for entries affecting individual customers' and creditors' accounts). If a posting period of a month rather than a week were assumed the saving would of course be more pronounced.

Account Type of Journal. The account type of journal is of sufficient importance to merit some attention. This is a form of the

Cash		Commerce Bank		Accounts Receivable		Merchandise		Sales	
Dr.	Cr.	Dr.	Cr.	Dr.	Cr.	Dr.	Cr.	Dr.	Cr.
1,000 00									
									1,000 00
				1,500 00					
1,200 00					1,250 00			50 00	1,500 00
						850 00			
			2,160 00				90 00		
	2,200 00	2,200 00							
800 00									800 00
2,000 00	2,000 00	2,000 00							
			3,500 00				75 00		
	25 00								
				1,100 00					1,100 00
1,000 00					1,035 00			35 00	
	1,775 00	1,775 00							
900 00									900 00
				1,200 00					1,200 00
1,100 00					1,140 00			40 00	
						1,200 00			
	2,000 00	2,000 00							
850 00									850 00
				1,000 00					1,000 00
800 00					830 00			30 00	
						2,000 00			
						600 00			
	25 00								
			200 00						
	1,625 00	1,625 00							
1,200 00									1,200 00
				1,600 00					1,600 00
1,250 00					1,300 00			50 00	
			200 00						
			1,455 00				45 00		
			300 00						
			750 00						
	2,450 00	2,450 00							
12,100 00	12,100 00	12,050 00	8,565 00	6,400 00	5,555 00	4,650 00	210 00	205 00	11,150 00
(1)	(1)	(30)	(30)	(40)	(40)	(50)	(50)	(300)	(300)

divided-column journal in which the debit and credit column pertaining to a particular account are placed in juxtaposition, thus substantially duplicating in the journal the structure of the account in the ledger. The example appearing on this and the preceding page illustrates the essential features of this type of journalizing medium.

As in the preceding illustration the traditional form of the simple journal entry is abandoned. With two exceptions but a single line is devoted to each transaction (or to each daily summary of like transactions). Such vertical concentration is of advantage, as has been explained, in that more transactions can be recorded on each journal page, with consequent greater utilization of the special-column device. A special feature of the example is the segregation at the left of all columns containing entries which must be posted

individually. With this arrangement it is a convenience to place the space for account titles adjacent to these columns.

The credit column under merchandise is employed here for the purpose of recognizing discounts and other allowances on purchases. This assumes that merchandise cost is charged with gross invoice prices rather than net, accounts payable being credited with gross figures, and that adjustments can properly be credited directly to merchandise cost. The absence of credits to merchandise covering the cost of goods sold or otherwise utilized indicates either that no continuous inventory system is in effect or that the data of withdrawals, if such a system is in use, are not formally journalized from day to day. The debit sales column is also used to record discounts and allowances, in this case those granted to customers. The sales account, although essentially a one-column account, is usually given the two-column form, and the debit column can be made to serve a minor purpose in connection with adjustments. It should be pointed out in this connection that where an account has a single active side a single column for such account may be provided in the journal, even if the journal form used is predominantly of the account type.

Proving and Posting Account Journal. The example displays the journal page as it would appear after proving and posting. The following schedule shows the "proof" in trial-balance form:

	Dr.	Cr.
General Ledger	$ 1,800	$ 2,000
Creditors' Ledger	7,525	5,150
Cash	12,100	12,100
Commerce Bank	12,050	8,565
Accounts Receivable	6,400	5,555
Merchandise	4,650	210
Sales	205	11,150
	$44,730	$44,730

The entries in the general-ledger columns are posted in detail to the accounts named. The individual creditors' accounts are likewise posted through the journal in the form illustrated. In this example, however, the practice is followed of indicating the act of posting to the creditors' ledger by a check mark rather than with an account or sheet number. This assumes that with an alphabetic arrangement of accounts payable the name of the creditor is a sufficient identification. The footings of the creditors'-ledger columns are of course posted to the controlling account in the general ledger.

The form of the illustration assumes that posting to the accounts of credit customers is accomplished from underlying documents rather than through the journal. As explained earlier this is desirable in all cases in which credit sales and collections on account are numerous from day to day. By posting to the individual accounts receivable outside of the journal it is possible to journalize in summary form the credit sales and collections of each day, with resulting marked condensation of the journal entries required. It is likewise assumed that all subsidiary records lying back of the merchandise and sales accounts are posted from original papers and not through the journal.

As in other forms of divided-column journals the totals of all special columns are periodically posted to the proper accounts, the folio numbers being attached to indicate that posting has been accomplished and for reference purposes.

Posting from a journal of this type may be deferred for a considerable period, particularly with respect to the special columns. The cash columns, for example, coupled with the opening balance, show the status of cash as effectively as a cash account in ledger form and hence can take the place of a ledger account for a week, month, or even for the entire year. It is quite possible, in fact, to dispense with the general-ledger accounts corresponding to the pairs of special columns in the journal and thus use the journal columns, continuously, as a partial substitute for the ledger. If this is done it is necessary to include opening balances in the journal and combine such balances with page footings when forwarding (care being taken in proving the individual page to exclude amounts forwarded, as such amounts, since they represent the status of a limited number of accounts, will not show an equation of debits and credits). Most accountants, however, prefer to maintain formal ledger accounts for all pairs of special columns, as very little work is required to post periodic column footings and the ledger form has some advantage over the journal columns as a permanent, summarized record. There is also something to be said for the use of the ledger as a complete representation of the accounts.

Limitations of General Divided-Column Journal. A comprehensive divided-column journal, such as has been illustrated and discussed in the preceding pages, is an especially desirable device in the relatively small enterprise where a single bookkeeper does all of the

regular journalizing and posting. In large enterprises, however, such a book is not ordinarily suitable and further elaboration of the journal is necessary.

Even in the small business the introduction of the improved journal does not necessarily render the simple journal entirely obsolete. The recognition of depreciation and other accruals, the transferring of expense and revenue elements from account to account in the process of periodic summarization—these and similar adjustments can be most conveniently journalized in the simple journal. It is obviously not feasible to open special columns for the many relatively inactive accounts affected by adjusting and closing entries, and to introduce the record of periodic analyses and transfers into the unclassified columns of the divided-column journal would consume an unreasonable amount of journal space in that it would entail the use of one or more pages which would have few if any entries in the special columns. Further, in view of their marked effect upon the income report and the statement of financial condition the adjusting and closing entries are of such importance as to deserve the formal presentation, with complete explanations, that is afforded by the simple journal.

Special Features of Journal Development. Attention has been called to the fact that under modern office procedure posting to subsidiary ledgers is usually accomplished from invoices and other underlying documents and compilations, formal journalizing of the transactions involved being confined to the entries affecting general-ledger accounts. It has also been pointed out that the entries in the journal covering the controlling accounts are often summaries of like transactions for the day or other period. This feature of journal development requires a word of emphasis. Under present-day practice, especially in the larger enterprises, journals are in considerable measure compilations of aggregates of debit and credit entries; in the typical journal entry, in other words, the specific transaction is obscured and the record is made primarily in terms of summaries of like transactions occurring in the shift (of a cashier, for example), day, week, or—in some cases—month.

Related to and in some measure opposed to this development is the practice of combining journalizing with underlying summarization and analysis. The classified recapitulation of the sales invoices for the day, for example, may be prepared in such form that the analysis sheet itself serves as a sales journal. Similarly a tabulation

No. 63

JOURNAL ENTRY VOUCHER

FOR ENTRY UNDER DATE OF October 31 19 4-

		NAMES OF ACCOUNTS AND DESCRIPTION OF ENTRY	ACCOUNT NO.	DETAIL	√	DEBIT	√	CREDIT	√
10	1	Reserve for Bad Debits	18			75 00			
		Accounts Receivable	15					75 00	
		(J. M. Scraggins)		75 00					
		TOTALS	—	—	—		—		—

	PREPARED AND CERTIFIED CORRECT BY:	APPROVED:	APPROVED FOR ENTRY:	POSTED
Oct. 15 19 4-	D. J.	C. B.	A. R.	Oct. 31 19 4-

Printed in U. S. America
Form 492—10M-10-47-Methods (D4568)*2

of remittances from customers, or a payroll compilation, may be used as a journalizing medium. Such journal records—to the extent that they represent in their composition the particular item or transaction—are evidently not entirely unrelated to the conventional journal in which each specific transaction, or each underlying entry, is given a place.

The extension of the use of the journal voucher is another development deserving mention. A journal voucher is essentially a separate sheet or form on which the journal entries of a particular transaction, or of a related group of transactions, are authorized and set up, either in two-column or multiple-column form, and accompanied by explanation and supporting data in more or less detail. Under one method the entries provided through such vouchers are recorded in regular columnar journals before being posted to the ledger accounts; under another plan posting is accomplished directly from the vouchers, and the voucher files or binders themselves represent the journal. In some cases the use of journal vouchers has been extended to a point at which the older types of journal forms have almost disappeared.

The journal voucher takes a great variety of forms ranging from the simple columnar sheet (see page 205) to a multiple-column folder providing for summarization and analysis of the underlying data. Several different forms, suitable for various classes of transactions, are often found in a single enterprise. Vouchers are prepared in numbered series, which facilitates reference. Supporting memoranda and compilations are often filed with the journal voucher.

Illustrative Exercise. The following exercise is intended to emphasize the construction and use of a divided-column journal suited to the conditions of a small business.

Data

C. D. Leyt owns and operates a small restaurant. Food supplies are purchased daily, both for cash and on account, from a number of sources. There are no sales on account. Receipts (less expenditures in actual cash) are deposited daily. The larger bills are paid by check. Part-time helpers who come in at busy hours, on evenings and week-ends, are usually paid in cash from day to day; other employees are paid biweekly. The proprietor supplies his own home with merchandise taken from stock at cost prices; such transactions occur almost every day. Only one sales account is used. Bills for utility services are paid monthly.

On December 12, 1949, the following transactions occur:

(1) Purchases of food supplies on account, $40, as follows: S. O. Swinton, $15; Fosdick Co., $20; Harris & Harris, $5.

Unclassified Dr.	Unclassified Cr.	Accounts Payable Dr.	Accounts Payable Cr.	F	Date 1949		Accounts	Memo	Cash Dr.	Cash Cr.	Bank Dr.	Bank Cr.	Food Supplies Dr.	Food Supplies Cr.	Leyt-Cur-rent Dr.	Labor Dr.	Sales Cr.
			15 00	30	Dec.	12	S. O. Swinton	Invoice file					15 00				
			20 00	14			Fosdick & Co.	" "					20 00				
			5 00	15			Harris & Harris	" "					5 00				
								Sam Sparks		10 00			10 00				
								Register reading	75 00								75 00
								Helpers time		5 00						5 00	
100 00				85			Rent	December—check #30				100 00					
								Deposit		60 00	60 00						
								Proprietor						5 00	5 00		
10 00				35			Equipment	Invoice file									
			10 00	28			Rex Hardware Co.										
		50 00		41			Wilson Meat Co.	On account—check #31				50 00					
470 00	200 00	650 00	700 00						900 00	900 00	650 00	600 00	450 00	40 00	150 00	70 00	900 00
√	√	(50)	(50)						(2)	(2)	(3)	(3)	(5)	(5)	(60)	(80)	(90)

(2) Purchases of food supplies for cash from Sam Sparks, $10.
(3) Sales for day, $75.
(4) Cash payments to temporary helpers, $5.
(5) Payment by check to H. O. Calkins for December rent, $100.
(6) Bank deposit, $60.
(7) Cost of food supplies drawn by proprietor, $5.
(8) Purchase of kitchen utensils on account from Rex Hardware Co., $10.
(9) Payment by check to Wilson Meat Co., on account, $50.

Directions

(a) Prepare a divided-column journal designed to serve as a journalizing medium for all the transactions of C. D. Leyt.
(*b*) Record the illustrative transactions of December 12, 1949.
(*c*) Using assumed page footings and folios show how this journal is posted.

Solution

(See form on page 207)

It should be noted that this journal form is an account type of journal, although in the case of the last three columns at the right only one column is required for each of the accounts affected. The form provides special columns for all of the active accounts as indicated by the data given. In this example folios are assumed for the subsidiary creditors' accounts as well as for accounts in the general ledger. The location of the date column shows a variation as compared with the illustration on pages 200–201.

Questions

1. What are the principal reasons for the development of the journal beyond the two-column form?

2. "The subdivision of journal columns has two purposes." Explain.

3. What are the considerations which control the extent to which journal columns should be subdivided and the selection of column captions? Name several accounts for which special columns should be provided in almost all enterprises.

4. Explain the need for the retention of unclassified columns in the general divided-column journal.

5. List the essential elements in the structure of the divided-column journal.

6. With an illustration show how summarization of like transactions and posting to subsidiary ledgers from underlying papers facilitate effective use of special columns in the journal.

7. Indicate the importance of regular footing and proving of the journal. What is meant by a "trial balance" of the journal?

8. Describe the process of posting from the divided-column journal and indicate precisely how this process is abridged through the use of special columns. Should posting be in terms of page-totals or period-totals?

9. Describe the account form of journal. What are the principal advantages and disadvantages of this form? Does the use of this type of journal justify the omission of certain accounts from the ledger?

10. Is the simple journal rendered entirely obsolete as a result of the development of divided-column journals? Explain.

11. "In some cases the journal form is merged with the underlying procedures of compilation and analysis." Explain.

12. "Under present-day practice columnar journals are largely restricted to entries representing summaries of like transactions." Explain.

13. Define the journal voucher and describe its use.

XII

SPECIALIZED JOURNALS

Need for Specialized Journals. The first step in the elaboration of the journal form is the introduction of the special column, as has been explained. The second main step consists of the division of the general divided-column journal into two or more separate and distinct books corresponding to important types of transactions or phases of business activity.

The principal reasons for this additional step have been previously indicated in some measure but may well be emphasized at this point. In the first place the use of separate journal records devoted to particular classes of transactions, like the use of the special column, brings about a preliminary segregation of important types of data with respect to which the management desires current information. Subdivision of the journal, in other words, is a part of a program of organizing the records and procedures in such a manner as to stress particular activities, departments, and phases of operation. Second, the use of specialized journals, under the control of different individuals, is an essential part of a system of procedure which, through specialization and integration of duties, tends to insure accurate clerical work and to discourage unauthorized and improper acts on the part of the office staff or other employees. Third, the division of labor represented by the use of specialized journals tends to develop clerical speed and efficiency just as specialization in manufacturing operations makes possible a larger physical output. Fourth, in the case of the large concern subdivision and specialization of journals and other records is necessary to make it physically possible to take care of the great number of business transactions which arise.

The use of a separate journalizing medium can be justified in the case of any class of transactions which have clear-cut characteristics

in common and which are sufficiently numerous to give rise to a considerable volume of clerical work from day to day. For business enterprise as a whole the principal groups of transactions which meet these conditions are as follows: (1) receipts of cash; (2) cash disbursements; (3) purchases of materials and supplies and the incurring of other costs; (4) sales of product. The most common types of specialized journals, accordingly, are the cash journals, the purchases books and other forms of cost registers, and the sales or revenue journals.

In connection with internal operations special books may be employed in dealing with such occurrences as withdrawals of materials and supplies from stores, accumulation of labor costs, completion of product, and shipments to customers.

There is no standard set of journal forms suitable for all businesses. The technical structure of the records employed will vary with the size of the enterprise, the character of its operations, and other factors. In many concerns highly specialized journals are used to advantage.

Overlapping of Specialized Journals. It is apparent that the groups of transactions listed above, as forming bases for the more common types of special journals, involve some overlapping. A cash sale, for example, is at once a receipt of cash and a sale or revenue transaction. Similarly in the case of concerns which buy goods or incur other costs on a cash basis, certain cash expenditures also represent purchase or cost transactions. It follows that in the development of specialized cash, cost, and revenue journals a procedure must be developed which will not result in unreasonable duplication in journalizing and which, in any event, will not bring about double posting of any entry.

One method of dealing with the situation is so to restrict the scope of each special journal as to avoid all duplication. Thus cash sales might be recorded only in the receipts journal, the sales book being confined to credit sales, and cash purchases might be recorded only in the disbursements journal, the purchases register being restricted to transactions on a credit basis. Or, conceivably, cash sales and cash purchases might be recorded only in the revenue and cost journals, respectively, the scope of the cash journals being accordingly narrowed. The principal objection to such schemes (aside from clerical difficulties) lies in the fact that some of the resulting journals

may be less satisfactory as means of displaying certain classes of data in preliminary form. If it is desired that the sales journal, for example, be maintained in such manner as to disclose the total volume of sales for the period to date, it would not be satisfactory to omit cash sales from this record. The main alternative procedure (generally more satisfactory) is to journalize all cash cost and cash revenue transactions in duplicate—once in the cash record and once in the cost or revenue record. Under this plan double posting is avoided by the simple expedient of posting no entries from a specialized journal to an account which is represented by another specialized journal employed in the system. Thus a cash sale would be recorded both in the receipts journal and in the sales book, but the cash data would be posted only from the receipts journal and the sales or revenue data would be posted only from the sales journal. In other words, the credit to sales would be checked without posting in the cash journal and the debit to cash would be checked without posting in the sales journal. Similarly double posting of cash purchases would be avoided by posting only the credit to cash from the disbursements record and only the debit to the merchandise account from the purchases book.

Another method of handling journal overlapping consists of the use of technical clearing accounts which bring about a cancellation of the entries recorded in duplicate. A cash-sales account, for example, might be opened in the ledger to which is credited the total of sales recorded in the receipts journal and to which is charged the corresponding total of cash as shown by the sales journal.

Splitting Transactions Between Journals. Another complication in connection with the use of separate journals arises in the case of the particular transaction which is related in part to one special journal and in part either to the general journal or to another special journal. For example, assume that in connection with a particular liability, which has been booked at a gross amount of $1,000, a special allowance of $100 is made by the creditor. On the face of it this transaction should be recorded in the cash disbursements journal to the extent of $900, the balance of the transaction being journalized in the ordinary journal or in a special book devoted to returns, allowances, and other adjustments of costs, provided such a record is maintained. On the other hand it is quite possible, through the use of auxiliary columns, or entries which are given some special designa-

tion, to record the entire transaction in the cash journal, and this is usually desirable from the standpoint of routine procedure. Another example arises where a fixed asset such as a piece of equipment is scrapped or otherwise retired, a sum of cash being realized and gain or loss, together with an adjustment of the depreciation allowance, being involved. Such a transaction can be readily recorded in full in the simple journal, but it cannot be taken care of very conveniently in the typical receipts journal. One way of dealing with such a case is to record the transaction in full in the general journal, taking care to mark the debit to cash in such manner (for example, with a check mark) that the item will not be posted, and to record only the amount of the cash item in the receipts journal, taking care to set up an unclassified credit which is marked in such fashion that it will not be posted. In each journal involved, of course, it is important that equal debits and credits be entered, whether the transaction is recorded in full or in part, as otherwise the individual journal will be thrown out of balance and will not prove. In general, the ingenuity and accuracy of the bookkeeper must be relied upon to insure the proper handling of all special transactions that do not easily fit into the system of records in use.

The division of the record of particular transactions between two or more special journals can be entirely avoided if unclassified columns for debits and credits are attached to each journal form. However, where the occasion for using such columns rarely arises for a particular journal their inclusion is hardly justified if some other satisfactory expedient is available.

It should be recognized that this problem of splitting transactions between two or more journal media arises only where separate journals are employed and tends to be more in evidence where highly specialized books are used. If, for example, the sales journal were restricted to credit sales all transactions with customers which were in part on a credit basis and in part on a cash basis would have to be divided between two journals in the matter of recording. Consideration of this complication also makes it clear that the use of the simple general journal, or a series of journal vouchers, to supplement a system of specialized journals is well-nigh unavoidable.

Receipts Journal. The receipts journal, as the name implies, is a journal devoted to those transactions which involve receipt of cash. The form shown on page 213 is a simple example. Among features

RECEIPTS JOURNAL

Date		Memo	Accounts	Acct. No.	✓	Cash Dr.	Com-merce Bank Dr.	Sales Dis-counts Dr.	Accounts Receiv-able Cr.	Sales Cr.	Unclas-sified Cr.
1949											
July	5	Register readings			√	300 00				300 00	
		Collection sheet			√	147 00		3 00	150 00		
		Deposit			√		347 00				
	6	Register readings			√	350 00				350 00	
		Notes payable register	Notes Payable	150	√	500 00					500 00
		Collection sheet			√	490 00		10 00	500 00		
		Deposit			√		1,340 00				
	7	Register readings			√	375 00				375 00	
		Collection sheet			√	294 00		6 00	300 00		
		Notes receivable register	Notes Receivable	45	√	400 00					400 00
			Interest Revenue	340	√	4 00					4 00
		Deposit			√		1,073 00				
	8	Register readings			√	250 00				250 00	
		Collection sheet			√	588 00		12 00	600 00		
		Deposit			√		838 00				
	9	Register readings			√	400 00				400 00	
		Collection sheet			√	637 00		13 00	650 00		
		Deposit			√		1,037 00				
						4,735 00	4,635 00	44 00	2,200 00	1,675 00	904 00
						(1)	(30)(1)Cr.	(310)	(40)	√	√

of the illustration deserving comment is the use of the bank column. By this means the process of depositing funds in the bank, which is recorded by a debit to the bank account and a credit to the general cash account, is recognized in the receipts journal. It would be possible to treat deposits as disbursements of cash, to be taken care of through the disbursements journal, but the procedure followed here is preferable, as depositing is essentially a part of the process of receiving funds. In the example all cash receipts are assumed to be deposited daily, with the exception of an amount of $100 on July 5. In general the deposit of all receipts, and the establishment of change funds or other office funds by check, is the ideal procedure.

Another feature of this form is the introduction of the column for sales discounts, a debit element other than cash. Many concerns charge the full amount of the invoice, including discount offered for early settlement, to the customer's account. This procedure makes it necessary, when the customer pays the net price, to charge the discount—the difference between the cash received and the amount to be credited to the customer—either to the sales account directly or to a special offset account. Where this plan is in use it is accordingly desirable to make provision for the recognition of the discount in the receipts journal, as this makes it unnecessary to split the record of collections involving discounts between the receipts journal and the general journal. If there were no means of recording discounts in the receipts journal it would be necessary on July 5, for example, to record collections from credit customers by an entry of $147 in the cash column and an equal entry in the column for accounts receivable, in the receipts journal, and additional entries in the general journal as indicated by the following:

Sales Discounts	$3	
Accounts Receivable		$3

This treatment is obviously less convenient.

If sales and receivables are recorded at net prices, a commendable practice followed by some concerns, there is no need for a debit discount column in the receipts journal and collections of net prices from customers are recorded without complication. Where, however, the discount lapses and the gross price is collected (which will presumably be the exceptional case), it will be necessary to credit a special revenue adjustment account with the amount of discounts included in collections. This can be done in the receipts journal

through the unclassified column, or by means of entries in the general journal (debiting accounts receivable and crediting discounts collected) followed by the regular collection entries in the receipts journal. Another possibility is to provide an unclassified debit column in the receipts journal to take care of the need for possible debit adjustments.

Additional special columns can be used to advantage in particular situations. Where many notes receivable are taken from customers, for example, a special credit column for such notes may be introduced. Where interest collections are frequent an interest column may be employed. It is of course necessary to have as many bank columns as there are bank accounts to which deposits are regularly made. The number and character of the columns used will naturally be governed by the circumstances of each case.

In arranging columns in the specialized journal it is not necessary to put all debit columns at the left and all credit columns at the right as is done here. The arrangement should be based entirely on considerations of expediency. There is some advantage, for example, in locating columns that will be posted in detail at the left, so that they will be near the spaces for account titles and numbers.

The form of receipts journal shown assumes that all subsidiary accounts involved are posted directly from underlying documents. Another characteristic is the use of account numbers as well as titles to identify the entries which must be posted individually. If desired the space for these numbers in this example might be placed adjacent to the unclassified column. The array of check marks under these conditions serves simply as a means of indicating verification and completion of the work of posting.

Proving and Posting Receipts Journal. This type of journal is proved by adding the totals of the cash and discount columns and comparing the result with the grand total of the three credit columns, as follows:

	Dr.	Cr.
Cash	$4,735	
Sales Discounts	44	
Accounts Receivable		$2,200
Sales		1,675
Unclassified		904
	$4,779	$4,779

This comparison may be made directly on the journal page by transferring the total of the discount column to the cash column and the totals of the columns for sales and receivables to the unclassified column, and thus obtaining grand debit and credit totals, respectively. The total of the bank column may be included in each grand total if desired.

The receipts journal is posted in essentially the same manner as is any other special-column book. The cash and discount columns (referring to the example) are posted in totals to the debit sides of the accounts designated (folios 1 and 310). The total of the receivables column is posted to the credit side of the controlling account in the general ledger. The total of the sales column, in accordance with the preceding discussion of journal overlapping, is checked without posting, the footing of this column being taken only for the purpose of proving the journal. The entries in the unclassified column are posted item by item, the total being computed only in connection with the journal proof.

The posting of the bank column requires special attention. The total of the column, the amount of deposits for the week, is posted to the debit side of the bank account, number 30 of the general ledger. The same total must be recorded on the credit side of the cash account, folio 1 of the ledger. The double posting is evidenced by the use of two folio numbers below the footing of the column, and the fact that one entry is a credit is appropriately indicated. It is of course possible to introduce a special credit cash column for deposits, in which case the credit to cash is obtained from the footing of this additional column. The method shown here illustrates the possibility, in special connections, of making a single column in the journal do double duty. The procedure followed, it should be noted, makes it necessary to charge to cash the amount of all deposits not actually drawn from cash. When on July 6, for example, the amount of $500 is borrowed and deposited the amount of the deposit is entered in the cash column and also, as a part of the day's deposits, in the bank column.

The fact that posting is illustrated here for convenience in terms of weekly totals does not deny the possibility of postponing the process for a longer period. In general a satisfactory posting schedule for hand-written special-column journals is to post detailed items daily and column totals monthly.

Disbursements Journal. The disbursements journal is a medium for journalizing transactions representing the expenditure of cash. The form on page 218 illustrates this type of journal. In this example it is assumed that all payments except those for incidentals and payrolls are made by check. As in the case of the receipts journal discussed above, no distinction is drawn between the general cash account and accounts with special office funds used for making payments. This topic receives attention in Chapter XIII. The example assumes the use of a cost ledger, containing the accounts with current operating charges, and controlled by an account in the general ledger. It is also assumed that costs and accounts payable are recorded in terms of net prices, and hence no column is provided for purchase discounts.

As is the case with other journal forms the number and character of the columns employed in the disbursements journal will vary with the circumstances. If an enterprise maintains several active checking accounts, for example, it may be expedient to introduce a special column for each bank (or to divide the disbursements journal into several distinct books, one for each bank). Wherever any cost element is commonly acquired on a cash basis, and the entries involved are fairly numerous, a special column can be introduced for such element. In some situations it may be desirable to employ columns for notes payable and interest, or for charges to other liabilities.

Posting Disbursements Journal. The process of proving the form of disbursements journal illustrated here involves no complications. The footing of the unclassified column is taken solely for the purpose of proving.

In posting, all column totals except the footing of the unclassified column are posted to the appropriate general-ledger accounts, as indicated by the folios under the footings. In addition the debits to the various operating cost accounts are posted in detail. In the case of the unclassified column the charge to merchandise on July 6 illustrates a special condition not infrequently arising in bookkeeping practice. The fact that this charge is marked "N. P." (not posted) implies that a purchases journal is being maintained concurrently through which all purchases of merchandise, on account or for cash, are being journalized and posted. To avoid perpetuating in the ledger the overlapping of the journals under these conditions it is

DISBURSEMENTS JOURNAL

Date		Memo	Accounts	Acct. No.		Unclassified Dr.	Accounts Payable Dr.	Cost Ledger Dr.	Cash Cr.	Commerce Bank Cr.
1949 July	5	R. C. Ross—check #183			√		400 00			400 00
		Avery & Wilks—check #184			√		500 00			500 00
		Stamps	Office Supplies	254	√			5 00	5 00	
		Advertising supplies	Advertising	231	√			25 00	25 00	
	6	Rossiter Co.—check #185			√		500 00			500 00
		Delivery equipment—check #186 (general journal #40)	Delivery Equipment	81	√	500 00				500 00
		Stationery	Office Supplies	254	√			10 00	10 00	
		J. O. Stack Co.—check #187			√		800 00			800 00
		Merchandise—check #188		N.P.	√	600 00				600 00
	7	V. D. Warthin—check #189			√		200 00			200 00
		Waller & Reid—check #190			√		400 00			400 00
	8	Stamps	Office Supplies	254	√			5 00	5 00	
		Rossiter Co.—check #191			√		200 00			200 00
		Bay Telephone Co.—check #192	Telephone	248	√			10 00		10 00
		Innes Co.—check #193			√		350 00			350 00
	9	Payroll—store	Store Labor	258	√			150 00	150 00	
		Payroll—office	Office Labor	255	√			100 00	100 00	
		Waller & Reid—check #194			√		300 00			300 00
		Store equipment—check #195	Store Equipment	71	√	100 00				100 00
						1,200 00	3,650 00	305 00	295 00	4,860 00
						√	(120)	(200)	(1)	(30)

necessary, as previously pointed out, to check the cash entries in the purchases record without posting and to check all merchandise entries in the disbursements record without posting. Since no special column for merchandise is maintained in this disbursements journal (due to the fact that purchases on a cash basis are assumed to be rare) it is necessary to place the merchandise entries in the unclassified column and to take care that such entries are not posted. Other entries in this column are of course posted individually in the usual manner.

The record of transactions which are in part on a cash basis and in part on a credit basis must either be divided between the cash journals and some other form of journal or special arrangements must be made to take care of all entries involved in the cash journals. In the illustration the purchase of delivery equipment on July 6 is an example of such a transaction. Reference to the underlying documents and to page 40 of the general journal, it will be assumed, shows that a delivery truck was purchased at a cost of \$1,500, and that a note was given for \$1,000 in addition to the cash payment of \$500. The transaction is recorded in the disbursements journal, however, only to the extent of the cash payment, and the general journal is used to complete the record. To make it possible to record such transactions in full in the disbursements journal it would be necessary either to introduce a credit unclassified column or to make the single unclassified column do double duty by providing some special means (for example, another color) of designating credit entries. If this latter expedient were used it would be necessary to take a separate footing of all credit entries in the unclassified column. Such a transaction, of course, might be recorded in full in the general journal, assuming that it were considered feasible to omit some cash entries from the regular disbursements record. Another possibility is to treat the transaction, at the outset, as a purchase on account, the settlement of the account then being divided between disbursements journal and general journal.

Composite Cash Journal. The receipts and disbursements journals are sometimes juxtaposed on alternate facing pages of the same volume, the whole being called the "cash book." The use of such a journal brings about a concentration of all transactions affecting cash, including bank account, in one record, and some deem this to be an advantage, particularly in small concerns. Through the intro-

duction of columns for cash and bank balances it is in fact possible to employ the composite cash book as an elaborate form of cash account, from which at any time may be determined the cash position as well as the details of receipts and disbursements.

On the other hand there are obvious objections to combining two essentially independent journals. From a clerical standpoint it is often inconvenient to organize the record of receipts and disbursements on facing pages of a single volume or binder, especially in view of the fact that the same number of columns may not be required for each side. It is also likely that the two sides will not be filled simultaneously, another source of waste space. More important is the fact that in most concerns of some size the division of the work of journalizing cash between two employees is usually helpful in securing efficient handling of the work of recording and as a feature of the system of cash control and audit. There is no important reason, moreover, for attempting to secure a comprehensive cash account in journal form.

Purchases Journal. The ordinary purchases journal is devoted to recording the purchases of merchandise, materials, and supplies. The form on page 221 is an example of a special-column purchases record.

Aside from money columns, the illustrative form provides space for recording date, terms of settlement, name of vendor, and vendors' addresses. This part of the journal can be readily expanded to take care of such additional data and references as order number, invoice number, description of purchases, method of shipment, etc. In general, however, the journal form should not be loaded with details which can be readily ascertained, when needed, from files of underlying documents.

The expression "2/10, n/30," for example, means that 2% of the gross invoice price is deductible if payment is made within ten days from date of invoice and that if advantage is not taken of the discount the gross amount of the bill is due in thirty days. See discussion of discounts in Chapter XIV.

A special column is used here for notes payable. Such a column is appropriate where numerous purchases are based directly upon notes and drafts and it may also be justified where such transactions are not common provided all credit purchases, other than those on account, can be recorded in this column. The use of the bank col-

PURCHASES JOURNAL

Date		Terms	Vendors: Name	Vendors: Address	✓	Merchandise Dept. A Dr.	Merchandise Dept. B Dr.	Store Supplies Dr.	Accounts Payable Cr.	Notes Payable Cr.	Commerce Bank Cr.
1949 July	5	2/10, n/30	T. Marshall Co.	Marshall, Mich.	✓	200 00	100 00		300 00		
		Cash	Lucas & Wilson	Ames, Iowa	✓			100 00			100 00
		2/10, n/30	J. B. Coates Co.	Lapeer, Mich.	✓	500 00			500 00		
	6	n/30	Western Mfg. Co.	401 Main St., City	✓	500 00	300 00		800 00		
		Cash, $200 60-day, 6%	Acme Co.	613 Main St., City	✓	400 00	800 00			1,000 00	200 00
	7	n/30	Roe & Budd	Milford, Mich.	✓		400 00		400 00		
		Cash	Lucas & Wilson	Ames, Iowa	✓			50 00			50 00
	8	60-day, 6%	A. R. Darling	Hinsdale, Ill.	✓	500 00				500 00	
		1/10, n/30	Acme Co.	613 Main St., City	✓	300 00			300 00		
	9	n/60	T. Marshall Co.	Marshall, Mich.	✓	200 00	200 00		400 00		
		2/10, n/30	Western Mfg. Co.	401 Main St., City	✓		50 00		50 00		
						2,600 00	1,850 00	150 00	2,750 00	1,500 00	350 00
						(50.1)	(50.2)	(55)	(120)	(150)	✓

umn assumes that checks are issued for all cash purchases. In cases where all purchases are on a credit basis this column would of course be suppressed. Another possibility would be to introduce a general or unclassified credit column, in lieu of columns for notes payable and bank, to cover all purchases not on account. The entries in such a column would then be posted individually to bank, notes payable, or any other account that might be involved. The use of the column for store supplies in the illustration is suggestive of the possibilities of expansion in this direction. Where acquisitions of various classes of supplies, and fixed assets such as equipment, are all recorded in the purchases journal it is likely to be advisable to open an unclassified debit column to take care of such entries, as seldom will any one account be sufficiently active to justify a special column.

There may be as many merchandise or materials columns as there are active merchandise or materials accounts in the general ledger. As in the case of other kinds of costs another device to secure classification is the use of space for account numbers in conjunction with a single money column. Under this procedure, of course, it is necessary to post the entries individually to the accounts as indicated. It is assumed in the example given that if a detailed stores ledger is in use posting to the subsidiary accounts is accomplished through the underlying papers rather than through the journal. Where the buyer regularly pays freight or other transportation charges on purchases a special column or columns may be employed to take care of entries representing these additional costs. Transportation charges on purchases are essentially a part of the cost of merchandise and can properly be included directly in the merchandise account; nevertheless it may be advantageous in some situations to maintain a separate account for this element until the close of the period. A further possible feature of the purchases journal is the use of a credit column for returns. Such a development, however, also requires the introduction of one or more debit columns and hence is of doubtful advantage. Where returns and special allowances are very common a special journal, devoted solely to such adjustments, is sometimes employed. In general, it may be added, it is better to divide a particular journal into two or more separate records than to permit it to become unduly elaborate.

The processes of proving and posting the purchases journal are similar to the procedures involved in dealing with other types of specialized journals. In the illustration the bank column is checked

SALES JOURNAL

Date		Inv. No.	To Whom Sold: Name	To Whom Sold: Address	Terms		Accounts Receivable Dr.	Cash Dr.	Notes Receivable Dr.	Sales Dept. A Cr.	Sales Dept. B Cr.	Sales Misc. Cr.
1949												
July	5	118	B. R. Decker	Lima, Mich.	2/10, n/30	√	200 00			200 00		
		119	S. J. Trout	Lodi, Mich.	2/10, n/30	√	250 00			200 00		50 00
		120	H. T. Winton	Brighton, Mich.	2/10, n/30	√	400 00				400 00	
			Sundry	City	Cash	√		150 00		50 00	100 00	
	6	121	T. H. Balsam	Clinton, Mich.	2/10, n/30	√	100 00			100 00		
		122	E. N. Trapp	Xenia, Ohio	Cash-note 60-day, 6%	√		250 00	750 00	400 00	600 00	
			Sundry	City	Cash	√		400 00		250 00	125 00	25 00
	7	123	L. T. Winney	Delhi, Mich.	n/30	√	300 00			300 00		
		124	R. M. Union	Hudson, Mich.	2/10, n/30	√	200 00			200 00		
			Sundry	City	Cash	√		200 00		75 00	125 00	
	8	125	R. O. Walz	Salem, Mich.	60-day, 6%	√			500 00		500 00	
		126	S. Abelson	Allen, Ohio	5/10, n/30	√	800 00			800 00		
			Sundry	City	Cash	√		350 00		150 00	150 00	50 00
	9	127	R. S. Wright	Felton, Ind.	n/60	√	100 00			100 00		
		128	V. N. Wiley	Ovid, Mich.	1/10, n/30	√	200 00				200 00	
		129	Johnson & Son	Chatham, Ont.	2/10, n/30	√	500 00			350 00	150 00	
			Sundry	City	Cash	√		450 00		200 00	225 00	25 00
							3,050 00	1,800 00	1,250 00	3,375 00	2,575 00	150 00
							(40)	√	(45)	(301)	(302)	(303)

without posting as it is assumed that the disbursements involved are also recorded in the disbursements journal and will find their way to the bank account through that medium. If desired, the postings to particular vendors' accounts may be secured through the journal rather than from underlying papers. In this event the pages of the accounts of the subsidiary ledger are listed as posting is accomplished, and a space for this purpose must be available—possibly adjacent to the accounts payable column.

Sales Journal. The sales journal, as the name indicates, is used in recording sales of merchandise and, in some cases, other types of revenue. The form on page 223 is illustrative. This form provides for the recognition of only three classes of sales but it is evident that it could be readily expanded to take care of a more extensive classification of revenues (through the use of special columns for all active divisions of sales and a general sales column, supplemented by space for account numbers, for all other classes of sales recognized in the ledger). In more elaborate sales journals, further, columns are sometimes introduced to cover merchandise costs and delivery charges applicable to the various classes of sales. Through the addition of columns for special revenues and earnings such as repair service, rent, interest, etc. the sales journal can also be used as a complete revenue and income journal, although it is to be doubted if such a comprehensive record is desirable for most concerns. The introduction of columns for sales returns and allowances is still another way in which this journal may be expanded.

The sales journal is often subdivided into a number of separate records corresponding to main departments of the business. In the field of automobile distribution, for example, separate journals may be used for sales of new cars, sales of used cars, and sales of parts and accessories. Separate sales journals may also be provided for branches or other major sales outlets.

In the illustration the cash sales entries are assumed to be daily totals not accompanied by numbered invoices. It must be understood, however, that register readings or sales tickets lie back of these entries and furnish the basis for division between the two classes of sales. The fact that no unclassified debit column is introduced implies that all sales other than for cash are based on accounts receivable and notes.

Proving and posting in this case involve no special features. The

total of the cash column, included in this journal to complete the record of sales, is not posted, as the entries contained therein are assumed to be posted to the cash account through an accompanying receipts journal. No folio numbers are indicated in the example for specific customers' accounts, but in view of the fact that individual credit sales are listed by customers' names it is entirely feasible to post to the subsidiary ledger from the sales journal in this case.

Illustrative Problem. An example is needed to illustrate a consistent scheme of specialized journals designed for a particular type of situation.

Data

E. D. Cook Co. operates a combined wholesale and retail fruit store. Merchandise is purchased from day to day, all on account. Payments to merchandise creditors are of frequent occurrence. Retail sales are all for cash; wholesale sales are all on account. All receipts—less disbursements in actual cash—are deposited daily in the Exchange Bank. A change fund of $100 is maintained in the cash drawer. Part-time helpers who come in at busy hours, evenings and week-ends, are paid in currency from day to day; other employees are paid by check biweekly.

Managerial services are furnished by E. D. Cook, and payment therefor is usually made monthly by check. Sales are divided between wholesale and retail departments, and the merchandise cost of wholesale deliveries is computed and journalized daily. All wholesale deliveries are made by the Preston Delivery Service; payment is made daily, usually in actual cash. Purchases and wholesale sales are recorded originally in terms of gross invoice prices and discounts taken or allowed are entered in special accounts. Bills for utility service, rent, and other general operating costs are commonly paid monthly.

For the week of January 2–7 of a particular year the data of transactions are:

(1) Purchases of fruit: Adams Co., $300; Bay Produce Co., $450; Crandell, Inc., $300; S. B. Greene, $100; Cossi & Co., $250. Terms in each case, 2/10, n/30.

(2) Payments to merchandise creditors:

Name	Gross Bill	Discount	Check
Vannic Co.	$ 200	$ 4	$ 196
Cossi & Co.	250	5	245
S. B. Greene	50	1	49
Harry Chan	250	5	245
Bay Produce Co.	500	10	490

(3) Daily cash payments to temporary helpers total $150.

(4) Check received from Adams Co., covering return of merchandise on December 20, $50.

(5) Merchandise with a cost value of $40 is returned to Bay Produce Co. with consent of vendor.

(6) Retail sales, $1,000.

(7) Wholesale sales: S. O. Swinton, $300; Fosdick Co., $400; Kyer Co., $300; Lee & Grady, $450; Wilson Co., $200; Holly Produce Co., $150. Terms in each case, 2/10, n/30.

(8) Collections from credit customers:

Name	Gross Bill	Discount	Received
Allen Co.	$ 400	$ 8	$ 392
Fosdick Co.	400	8	392
Harris & Harris	200	4	196
Lee & Grady	500	10	490
Swisher Co.	300	5	295

(9) Bank deposits for week total $2,540.
(10) Payments to Preston Delivery Service: in cash, $75; by check, $25.
(11) Payment of January rent by check to R. S. Archer, $200.
(12) Purchase of store equipment from the Rex Co., $200; a down payment of 10% is made by check and the balance is treated as a purchase on account.
(13) Daily cost slips show total merchandise cost of wholesale deliveries for the week, $1,500.
(14) Store supplies purchased for cash, from Arco Co., $50.

Directions

(*a*) Prepare receipts journal, disbursements journal, merchandise purchases book, wholesale sales book, and general journal suitable to the conditions of E. D. Cook Co.'s operations.

(*b*) Assuming reasonable and consistent ledger folios show how these journals would appear if they were completely posted at the close of business, January 7.

Solution

(See forms on pages 227–229)

Comments

(1) Purchases and wholesale sales are assumed to occur in such numbers and amounts as to make it feasible to journalize each shipment and to post to the individual accounts in the subsidiary ledgers from the purchases and sales journals rather than from underlying documents. Merchandise costs only are handled through the purchases journal.

(2) It should be borne in mind that the entries covering deposits and retail sales in the receipts journal, labor and delivery costs in the disbursements journal, and merchandise cost of wholesale sales in the general journal, represent totals of individual entries assumed to be made from day to day.

(3) The bill numbers listed in the case of purchases represent an assumed series of numbers attached by the vendee for the purpose of identifying invoices. In general the data listed in the "memo" column are merely suggestive of references or descriptions which might be employed. Check numbers are not listed in the disbursements journal in this example.

(4) It is not intended to suggest that footing and posting in practice should be done weekly.

(5) In listing subsidiary ledger folios (otherwise than in the purchases and sales journals), the letter "R" is employed to designate accounts receivable and "P" to indicate accounts payable. In practice, as previously explained, the name without the sheet number is often considered sufficient identification, but the numbers are listed here for the purpose of more definitely suggesting the mechanics of posting. In the case of the credit to Adams Co. recorded in the unclassified credit column of the receipts journal the use of a general-ledger folio (120) as well as a subsidiary-ledger folio (P 4) shows that this item is posted in duplicate—to the controlling account, Accounts Payable, as well as to Adams Co. Similarly the debit to Bay Produce Co. and the credit to the Rex Co. in the general journal must be posted to

RECEIPTS JOURNAL

Date		Memo	Accounts	F	Cash Dr.	Exchange Bank Dr.	Sales Discounts Dr.	Retail Sales Cr.	Accounts Receivable Cr.	Unclassified Cr.
Jan.	2–7	For returns	Adams Co.	120 P4	50 00					50 00
		Register		√	1,000 00			1,000 00		
		Inv. #90	Allen Co.	R4	392 00		8 00		400 00	
		Inv. #100	Fosdick Co.	R10	392 00		8 00		400 00	
		Inv. #96	Harris & Harris	R12	196 00		4 00		200 00	
		Inv. #94	Lee & Grady	R26	490 00		10 00		500 00	
		Inv. #98	Swisher Co.	R39	295 00		5 00		300 00	
		Deposits		√		2,540 00				
					2,815 00	2,540 00	35 00	1,000 00	1,800 00	50 00
					(1)	(30)(1)Cr.	(310)	(301)	(40)	√

GENERAL JOURNAL

Date		Memo	Accounts	F	Unclassified Dr.	Unclassified Cr.	Mdse. Cost of W. Sales Dr.	Merchandise Cr.
Jan.	2–7	Returns	Bay Produce Co.	120 P7	40 00			40 00
		Cost, less down payment	Store Equipment	88	180 00			
			Rex Co.	120 P31		180 00		
		Cost slips		√			1,500 00	1,500 00
					220 00	180 00	1,500 00	1,540 00
					√	√	(280)	(50)

DISBURSEMENTS JOURNAL

Date		Memo	Accounts	F	Unclassified Dr.	Accounts Payable Dr.	Labor Dr.	Delivery Cost Dr.	Cash Cr.	Exchange Bank Cr.	Purchases Discounts Cr.
Jan.	2–7	Bill #58	Vannic Co.	P41		200.00				196.00	4.00
		Bill #54	Cossi & Co.	P11		250.00				245.00	5.00
		Bill #60	S. B. Greene	P17		50.00				49.00	1.00
		Bill #57	Harry Chan	P8		250.00				245.00	5.00
		Bill #55	Bay Produce Co.	P7		500.00				490.00	10.00
		Helpers		√			150.00		150.00		
		Preston		√				100.00	75.00	25.00	
		Archer—Jan.	Rent	260	200.00					200.00	
		Rex Co.	Store Equipment	88	20.00					20.00	
		Arco Co.	Store Supplies	55	50.00				50.00		
					270.00	1,250.00	150.00	100.00	275.00	1,470.00	25.00
					√	(120)	(255)	(281)	(1)	(30)	(51)

PURCHASES JOURNAL

Date		Bill No.	Terms	Creditors	F	Merchandise Dr.	Accounts Payable Cr.
Jan.	2–7	63	2/10, n/30	Adams Co.	4	300 00	300 00
		64	2/10, n/30	Bay Produce Co.	7	450 00	450 00
		65	2/10, n/30	Crandell, Inc.	9	300 00	300 00
		66	2/10, n/30	S. B. Greene	17	100 00	100 00
		67	2/10, n/30	Cossi & Co.	11	250 00	250 00
						1,400 00	1,400 00
						(50)	(120)

WHOLESALE SALES JOURNAL

Date		Inv. No.	Terms	Customers		Accounts Receivable Dr.	Wholesale Sales Cr.
Jan.	2–7	104	2/10, n/30	S. O. Swinton	38	300 00	300 00
		105	2/10, n/30	Fosdick Co.	10	400 00	400 00
		106	2/10, n/30	Kyer Co.	22	300 00	300 00
		107	2/10, n/30	Lee & Grady	26	450 00	450 00
		108	2/10, n/30	Wilson Co.	49	200 00	200 00
		109	2/10, n/30	Holly Produce Co.	13	150 00	150 00
						1,800 00	1,800 00
						(40)	(302)

the controlling account as well as to the specific subsidiary accounts. An alternative to the recording of two folios on a single line is the use of an additional line on which the name of the controlling account appears.

Questions

1. What factors account for the subdivision of the journal into a number of separate and specialized records?

2. What are the four most common groups of routine business transactions? List the corresponding journal forms.

3. Illustrate the overlapping of specialized journals and explain how double posting is avoided in such cases.

4. Give an illustration of a transaction which may be recorded in part in each of two journals.

5. What is the function of the receipts journal? Name the columns you would expect to find in this book and explain how the entries therein are posted. How are deposits handled through such a journal?

6. What is the function of the disbursements journal? Name the columns

you would expect to find in this book and indicate how the entries therein are posted.

7. Describe the composite cash book and indicate the principal objections to the use of such a record in lieu of two distinct journals.

8. Describe the purchases journal. What money columns would be *required* for this book in a case where all purchases are on account and but a single class of merchandise is recognized in the ledger?

9. Describe the sales journal. Is the cash column of the sales journal posted? Explain.

10. In what journal or journals would you record the accrual of rent revenue? The collection of rent revenue? The sale of a parcel of land on a contract, the buyer making a small down payment? The accrual of payroll? The payment of payroll? The receipt of a note from a customer to cover his open account?

XIII

RECEIPTS AND DISBURSEMENTS

Nature of Cash. As pointed out in the preceding chapter, the transactions which involve the receipt and disbursement of cash constitute a large part of the volume of the day-to-day business in the typical enterprise, and the specialized cash journals are among the most active and important of the records employed in bookkeeping. Accordingly, in undertaking at this stage a more intensive study of the common transactions and accounts the discussion may well begin with a further consideration of the nature of cash and the handling of cash transactions.

The essence of cash is *immediate availability as purchasing power.* That is, any type of money or the equivalent of money which can be exchanged readily for all kinds of goods and services, and which is generally acceptable in settlement of obligations, can be viewed as cash. The principal forms are: (1) coin and paper currency; (2) checks and other credit instruments functioning as money; (3) bank balances subject to check; (4) special funds and deposits. The first includes silver dollars, subsidiary fractional coin, silver certificates, Federal Reserve notes, and other forms of currency. The second form includes, in addition to ordinary checks, certified checks, bank drafts, cashiers' checks, travelers' checks, postoffice money orders, and express money orders. The treatment of certain kinds of credit instruments as cash is based on custom and convenience. Strictly speaking such instruments represent receivables, not money. The personal check, for example, is basically a bill of exchange, an order to pay, and there is always a possibility that it will not be honored. It is common practice, nevertheless, to treat checks as cash on hand when received, and to include them in the bank balance as soon as deposited, adjustments being made later in the relatively rare cases

of bad checks. Such receivables as matured bond coupons, and other instruments which are due and collectible, are also sometimes counted as cash, but this practice is objectionable. In no case should ordinary accounts and notes, to say nothing of informal and questionable claims and accounts, be classed as cash.

Bank accounts (particularly commercial or checking balances), rather than actual cash on hand, constitute the most important element in the total cash of the typical concern. Such accounts in essence are likewise nothing more than very liquid and highly safeguarded receivables, and in the past they have sometimes proved to be neither liquid nor secure. Nevertheless it remains true that the great bulk of business payments are made by means of checks or orders on bank balances, and there is every reason to believe that commercial bank accounts will continue to function as the principal form of business cash.

Savings accounts and certificates of deposit, although not freely available for checking purposes, are commonly included in cash. The same is true of funds on deposit which have been dedicated to a special purpose and whose use as money is therefore restricted. Funds on deposit with brokers and returnable on demand, can reasonably be viewed as cash.

Sinking funds and other forms of trusteed deposits should generally be excluded from cash.

Advances and deposits in connection with purchase contracts, agency commitments, and other special relationships should be accounted for as prepayments or receivables rather than as cash, even where the amount is returnable under prescribed conditions. Unexpended balances of working funds in the hands of parties acting as agents of the owner are likewise often excluded from cash. In the form of balance sheet prescribed by the Interstate Commerce Commission for steam railways, for example, amounts "receivable from agents and conductors" are treated as receivables rather than as cash.

Types of Cash Accounts. There are three main types of cash accounts. First, there is the general cash account which serves as a clearing account for all cash items flowing into the business. To this account should be charged all funds as received, from whatever source and in whatever form. Even in the case of borrowings at the bank which immediately become a part of the bank balance, and in the case of other additions to cash which do not come into the office

as checks or otherwise, it is advisable to adhere to this rule. To this account should be credited all deposits in bank accounts, and transfers to special cash funds or disbursements in the form of actual cash, if such are allowed under the system in use.

A second type of cash account is the commercial bank account, the record of cash in bank. This account is charged with the amount of all deposits and credited with the amount of all checks drawn thereon. In addition periodic adjustments for exchange, service charges, etc. are required. In the large concern, with plants and offices in various cities, a considerable number of separate bank accounts may be maintained for the purpose of making ordinary payments. Distinct bank accounts are also often established to take care of special funds and provide for certain classes of expenditures. Where funds have been raised for construction, for example, the same are often deposited in a special bank account. Funds for meeting payrolls may likewise be deposited in special accounts. In some cases several specialized accounts are carried with a single banking institution.

The third kind of cash account is that representing cash set apart at the main or branch office to meet routine expenditures and special advances to employees or others which cannot conveniently be taken care of by check and which therefore require actual currency. Such office funds are often referred to as "petty" cash or "imprest" cash and are required in virtually all enterprises. The office cash account is charged initially with a specified maximum amount which is drawn from the bank account by check and placed in the fund. Thereafter (under the ideal procedure) this account is credited, periodically, with the expenditures made by the cashier, as evidenced by his vouchers, and is charged with the amount of checks drawn to replenish the fund. The treatment of imprest cash will be further discussed later in this chapter.

In some cases a change fund is established for the cash drawer or register which remains continuously at a fixed amount, and is recorded in a separate account. Such an account, although allied to imprest cash, might be viewed as a fourth class of cash account.

Cash Control. Since cash is the medium through which all payments are effected it is evident that cash position is of great importance in determining financial standing and that a sound system of controlling cash is of marked assistance in this connection. Further,

since cash is the asset peculiarly subject to misappropriation, in addition to being subject to errors in handling and recording, the development of procedures and records designed to insure honest and accurate accounting for both receipts and disbursements is imperative. A proper scheme of control undoubtedly minimizes the possibility of mistakes and misuse of funds and facilitates the disclosure of errors and losses if such do occur.

The technical mechanism of cash control rests upon the principle of internal check. By internal check in this connection is meant in particular the systematic subdivision of the work of handling and recording cash, with a corresponding separation and specialization of records. This can, of course, be accomplished most completely in large concerns. Where the size of the business warrants it is advisable to have receipts handled by one person or group of persons while disbursements are taken care of by another person or group. Further, those charged with the actual handling of funds should not, in general, have control of the auditing procedure and the journal and ledger records.

In corporate organization the control of cash usually centers in the office of the treasurer. In such cases the treasurer exercises general supervision over the processes of receiving and disbursing and is in large measure responsible for the activities of cashiers, paymasters, remittance clerks, and other employees involved. The treasurer may also be responsible for the selection of depositories.

Classes of Cash Receipts and Disbursements. The principal sources of cash receipts are as follows: (1) cash sales over the counter; (2) cash sales by mail; (3) collections on account; (4) collections of notes and bills; (5) discounting notes and bills; (6) collections of interest, rent, etc.; (7) sales of securities or other special assets; (8) short-term borrowings; (9) long-term borrowings; (10) proprietary investments. Of these, cash sales and collections on account are naturally of most frequent occurrence in the typical enterprise and are the most important from the standpoint of the development of control. Not all of these classes of receipts, of course, will be found in every enterprise.

The principal classes of transactions which involve cash expenditures are: (1) payments on account to parties supplying merchandise, materials, and supplies on a credit basis; (2) payments to employees

or others for services rendered; (3) purchases of commodities and services on a cash basis; (4) payment of short-term borrowings; (5) dividend and interest disbursements; (6) expenditures on account of construction or purchase of fixed assets; (7) settlement of long-term debt; (8) purchase of securities and other investments; (9) capital payments to stockholders or other proprietors. As in the case of receipts the use of specialized records and procedures is especially needed in dealing with payments on account and other routine types of disbursements.

Cash Sales—Register and Ticket Control. In many retail merchandising lines, in establishments furnishing personal services (hotels,

CASH REGISTER REPORT

Department *Pine St. Store* Date *12/9/50*

	Registers #1	Registers #2	Registers #3	Totals
Reading today	*145*	*115*	*204*	*464*
Balance yesterday	*20*	*20*	*20*	*60*
Sales for day	*125*	*95*	*184*	*404*
Cash in register				
Coin	*30*	*25*	*35*	*90*
Currency	*105*	*90*	*155*	*350*
Checks	*10*		*13*	*23*
Total	*145*	*115*	*203*	*463*
Change fund	*20*	*20*	*20*	*60*
Net cash	*125*	*95*	*183*	*403*
For deposit				*403*
Short			*1*	*1*
Over				

Audited *L. O. Wilson* Head Cashier

theatres, laundries, etc.), and in some parts of the transportation field, cash sales "over the counter" are very numerous, and are often small in amount taken individually. Here the danger of mistakes in making change and in counting and tabulating, and the possibility of loss from theft or other misuse of funds, are obviously serious, and some system of control is essential. The device now very commonly employed to initiate control of receipts in such cases is the automatic

register. For effective control the register should show the amount of sale within the customer's view, furnish the customer with a printed receipt ticket, and produce a continuous printed and totaled record of the amounts registered, locked in the machine. In using registers it is desirable, if feasible, to employ a separate machine for each department and separate drawers for each person (or each relay of persons) who "ring up" sales. Some types of registers furnish a subtotal for each person or shift.

In connection with the use of cash registers a careful auditing procedure must be developed. At the close of each day's business or, as in the case of some restaurants, at the close of each cashier run or shift, the manager, head cashier, or other responsible person should audit each register. Regular forms (see example on preceding page) should be used in recording the results of register readings and audits.

The daily records of cash received afford a basis for entries in the journals and are of assistance in preparing bank deposits. The cash in the register in excess of the regular change fund should of course be regularly withdrawn from the machine and deposited.

The handling of receipts from small cash sales is sometimes centralized through the use of a ticket system by which the customer "buys" a ticket of the cashier for the amount of his purchase and receives the merchandise upon presentation of the ticket. The chief objection to this plan is its inconvenience to the customer. In cafeterias and many restaurants the customer receives a check or ticket from the waiter or other attendant which specifies the amount to be paid, and collection is made by the cashier as the customer leaves. Other familiar forms of ticket systems are those employed by theaters and railways. A feature of all ticket systems is the control of checks or tickets required. Under one plan a recording register, operated by the attendant who determines the amount of the charge, is used in issuing the checks. Another scheme involves the use of serially numbered tickets, all of which must be strictly accounted for. In auditing cash sales from day to day under the ticket system forms similar to that shown on page 235, with lines added for tickets turned in and tickets over or short, should be prepared.

Cash Sales—Invoice System. In the case of clothing stores, furniture stores, department stores, and other retail establishments where the average sale runs into a considerable amount, the use of regular sales

invoices (variously called slips, checks, and tickets) is an essential feature in the proper handling of cash. Each salesperson is provided with a book of numbered invoices, usually in duplicate or triplicate form. At the time a sale is made the invoice is filled out in detail by the clerk making the sale, one copy being furnished to the customer with the merchandise and the other copy or copies being retained for the purposes of audit and sales analysis. In the larger stores the actual money received from the customer either is turned over to a central cashier by means of a tube system or other form of

WEST & COMPANY

Summary of Daily Cash Receipts

Date *12/9/50*

Sources	
Cash Sales	*623*
Accounts Receivable—Customers	*305*
Accounts Receivable—Employees	*50*
Accounts Receivable—Other	
Notes Receivable and Interest	
Remittances from Branch Stores	
Customers' Deposits and Advances	*75*
Total	*1053*
Deposit	*1053*
Balance	

M. E. Marsh Cashier

mechanical carrier or is handed directly to a local or department cashier. (Registers may well be used in connection with the invoice system.) The work of the subordinate cashiers, where such are employed, is confined to making change, acting as custodian of cash during the day, and—in some cases—wrapping and checking merchandise as sold. The duties of a central or control receiving cashier include counting cash, making daily reports of cash received to the auditor or comptroller, and preparing the bank deposits. The daily report of cash received (see illustrative form on this page) may show the composition of cash (coin, paper currency, checks) and should dis-

play the origin of cash by departments or other sources in more or less detail. In some cases the report also includes a statement of the amount deposited and the balance retained as a change fund.

Internal audit of cash receipts from sales under the invoice system involves regular comparison of summaries of sales slips, register readings (if registers are used), cashier's reports, and deposit records, coupled with checks of cash held by cashiers as change funds. Where the procedure has been carefully worked out all discrepancies will be promptly disclosed by the audit, and it will not be difficult to localize responsibility.

The sales slips or invoices constitute the underlying basis for the entries in the accounting records. The entries in the receipts journal for the day's cash sales are drawn from the cashier's report or from a special summary of invoices. Entries in the sales records are based upon a tabulation of the invoices by departments or types of revenue as required by the system of accounts employed. The sales invoices also furnish the data for the daily reports of sales which are made to the proper executives.

Handling Collections on Account. Where payments on account are made by customers in person, and especially where such payments are primarily in the form of coin or paper currency, there is much to

WEST & COMPANY

RECEIPT TICKET

$ *100.00* *July 5* 19 *50*

Received of *L. J. Parsons*

210 Ash St.

City Fol. No. *61*

Amount	Inv. No.	Inv. Date
$ 75.00	*361*	*6/25/50*
25.00	*365*	*6/26/50*
$100.00		

WEST & COMPANY

By *J. B. Clark*

be said for the use of a system of receipt tickets. Such tickets (see illustrative form on page 238) should be prepared in duplicate or triplicate and should be numbered serially. One copy should be furnished to the customer as his receipt and the remaining copy or copies should be retained for accounting purposes. In the case of regular services such as electric power, water, etc. a portion of the regular bill or statement may serve as the receipt form.

In the case of receipts by mail (whether collections on account or advances with orders) a system of receipt tickets is not needed, particularly in view of the fact that such remittances are usually in the form of checks and drafts. The first step in controlling such collections is making provision for the opening of the mail and the listing of remittances by special clerks who have no further duties in connection with the handling of cash and who have no access to the books of account. (This procedure, of course, may not be feasible in the very small concern.) Under some routines the entries on the remittance sheets are verified by comparison with customers' accounts or statements before being recorded in the receipts journal. Comparison of the daily remittance sheets with the daily deposit slips affords a check on the amount of cash deposited.

Hospitals, hotels, and similar institutions face a special problem in controlling collections from customers. In such concerns it is necessary to maintain a detailed and "up-to-the-minute" account with each guest so that the collection of the proper amount when he leaves is assured. This requires fast-moving and accurate procedure, and in this connection highly specialized forms and office equipment are employed. Further, the rapid flow of transactions emphasizes the need for a sound system of internal check. Wherever the size of the establishment warrants, the work of registering guests, keeping accounts, and making collections should be fully subdivided among the members of the staff, with a corresponding specialization of records.

Depositing Receipts. The rule that all receipts must be regularly deposited in the bank account or accounts is an axiom of good cash procedure. In general funds received should be deposited daily, as this facilitates daily audits and verifications. In preparing funds for deposit all currency must be carefully counted and wrapped, and all checks and similar credit instruments must be properly endorsed.

The next step is the listing of the items to be deposited on the deposit slip. This slip should show the totals of all currency included

FIRST NATIONAL BANK
BURROUGHSVILLE

Robert Harris
826 Main St.

CHECKS		DEPOSITS	DATE	NO. OF CHECKS PAID	BALANCE
AMOUNT BROUGHT FORWARD			MAR 1'4-		931.61
15.20-	50.74-				
110.56-	254.03-		MAR 3'4-	4	501.08*
130.00-	107.45-	1,200.10	MAR 6'4-	6	1,463.73*
380.35-			MAR 7'4-	7	1,083.38*
DM 47.56-	190.00-				
31.50-	85.00-	895.90	MAR11'4-	11	1,625.22*
739.14 LST		452.80	MAR16'4-	31	1,338.88*
15.00-	4.55-		MAR18'4-	33	1,319.33*
1,218.75-	132.10-		MAR22'4-	35	31.52 OD
		600.00	MAR23'4-	35	568.48*
10.00-	12.73-				
21.25-	47.50-		MAR24'4-	39	477.00*
110.00-	52.00-	985.00	MAR29'4-	41	1,300.00*

Used with Ledger Form B 3263 (or with Ledger Form B 3312)
See also Statement Form B 3313

LAST AMOUNT IN THIS COLUMN IS YOUR BALANCE

18M-7-48-Sales (D7876) Printed in U. S. America Form B 3264

Robert Harris
826 Main St.

DATE	NO. OF CHECKS PAID	BALANCE	ANALYSIS: TRANS. ITEMS	CLGS. ITEMS	FLOAT	OTHER CHARGES
MAR 1'48		931.61				
MAR 3	4	501.08				
MAR 6	6	1,463.73	2	4	1,10	.10
MAR 7	7	1,083.38				
MAR11	11	1,625.22	5	2	21	.25
MAR16	31	1,338.88	3	1	20	
MAR18	33	1,319.33				
MAR22	35	31.52				
MAR23	35	568.48				
MAR24	39	477.00				
MAR29	41	1,300.00	3	5	30	.10

			NUMBER	RATE			
TOTAL BAL.	31,920	CHECKS PAID	41	.03	1.23	TOTAL CHARGES	2.25
LESS FLOAT	1,910						
WORKING BAL.	30,010	TRANS. ITEMS	13	.03	.39	INCOME @ 1.8%	1.05
LESS RESERVE	7,502						
NET BAL.	22,508	CLGS. ITEMS	12	.015	.18	PROFIT	
AVE. NET BAL.	776	OTHER CHARGES			.45	LOSS	1.20

in the deposit and a list of the checks in detail. Where many checks are involved the listing should be done mechanically on a special

form of sheet. In some cases deposit slips are prepared in duplicate, one copy being signed by the receiving teller and retained as a permanent record by the depositor; in other situations a pass-book is used as a means of securing the bank's receipt for funds deposited.

The work of preparing funds for deposit and taking the cash to the bank is ordinarily included within the duties of the cashier and his assistants. The person making deposits should be a responsible employee to whom this task has been definitely assigned. It should again be emphasized that those handling receipts and deposits should have no control over the journal and ledger records.

Each month or oftener the bank furnishes the depositing concern with a statement of account showing the balance at the beginning of the period, the checks paid, the deposits, and the concluding balance. See illustrative form on page 240. This statement affords a valuable check on the cash accounting of the depositor.

Controlling Disbursements—Use of Checks. The rule that all receipts shall be regularly deposited is complemented, in connection with the control of disbursements, by the rule that all disbursements other than small outlays made from imprest funds shall be made by check. Wherever commercial banking facilities are available—and they are to almost all enterprises—this procedure should be employed, as it is a primary feature of a sound system of handling disbursements. If disbursements are made by check a permanent record of payment is furnished by the canceled checks and an additional means of verification is afforded by statements issued by the bank. Further, if a proper procedure for issuing checks is developed the making of unauthorized payments is rendered difficult and any errors or irregularities which do occur are soon brought to light.

Where checks are pen-written the ordinary bound or stapled check book with three or four checks to the page is commonly employed. All checks are numbered consecutively, preferably before use. When the check is drawn the stub as well as the check form should be carefully filled. In writing in the amount mechanical devices, designed to prevent later alterations, are often used. The data for the disbursements journal are drawn either from the stubs or from a special list of checks prepared. Where checks are typewritten the check forms are usually in pads and are written in duplicate, at least in part. Under this procedure the carbon copies form a convenient basis for the entries in the cash records.

CHECK R

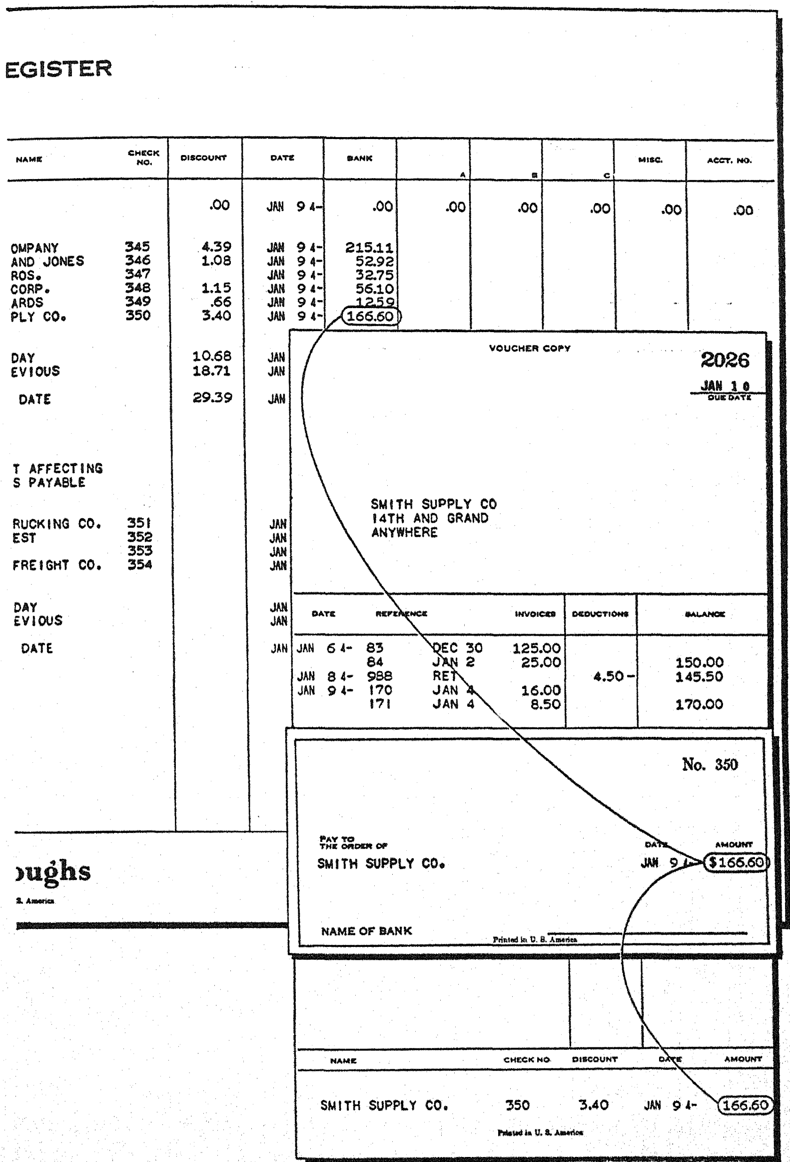
PREVIOUS BALANCE	DATE	REFERENCE	ACCOUNTS PAYABLE COMPLETE PAYMENT	ACCOUNTS PAYABLE PARTIAL PAYMENT	BALANCE	PROOF	
			.00				
	JAN 9 4-	2216 V	219.50				BURDSAL C
	JAN 9 4-	2217 V	54.00				CALLAHAN
	JAN 9 4-	2218 V	32.75				CURWOOD B
137.25	JAN 9 4-	2021 V		57.25	80.00	137.25	DEWBERRY
55.75	JAN 9 4-	2024 V		13.25	42.50	55.75	E. R. EDW
	JAN 9 4-	2026 V	170.00				SMITH SUP
			546.75				TOTALS TO
			627.10		627.10		TOTALS PR
			1,173.85				TOTALS TO
							CHECKS NO ACCOUNT
							GEORGES T
							R. W. HON
							CASH
							KENTUCKY
							TOTALS TO
							TOTALS PR
							TOTALS TO

Burr

Printed in U.

The process of signing checks should be definitely prescribed and fully safeguarded. All checks should be signed by the treasurer or other responsible official and there is something to be said for the system, in use in many concerns, which requires countersigning by a second official.

Some form of the so-called voucher system (see discussion in Chapter XV) should be employed in connection with a procedure under which disbursements are made by check. Under this system all purchases of goods and services and all other payments—excepting those handled through imprest funds—are made on account, or are assumed



to be made on account, even where payment is made immediately. Further, all accounts are prepared and approved for payment by means of a definite, formal process. In connection in particular with

the voucher system a special form of check, designed to show precisely what items are covered by the payment, is often used. The form on pages 242–243 illustrates one type of voucher check or pay warrant.

Check Register. Where all disbursements other than those made from imprest funds are made by check the disbursements journal takes the form of a check register. The forms on this and the preceding pages are illustrative.

CHECK REGISTER

Date		Ck. No.	Payee		No.	Unclassified Dr.	Unclassified Cr.	Accounts Payable Dr.	Commerce Bank Cr.
July	5	782	L. J. Johnson	√				120 00	120 00
		783	R. M. Abbott	√				330 00	330 00
		784	L. E. Greenwald	√				420 00	420 00
		785	Barnes & Perry	√				10 00	10 00
	6	786	Commerce Bank	√	150	1,000 00			1,040 00
				√	351	40 00			
		787	Doggett & Wilson	√	51		10 00	520 00	510 00
		788	R. L. Jackson	√				25 00	25 00
		789	J. H. Middleton	√				15 00	15 00
	7	790	Vulcan Mfg. Co.	√				80 00	80 00
		791	Bay Telephone Co.	√				220 00	220 00
		792	C.L. Dayton	√				40 00	40 00
		793	J. L. Sawyer Co.	√				70 00	70 00
		794	Frank Evans	√	51		20 00	500 00	480 00
		795	A. D. Adams	√				190 00	190 00
	8	796	Wines & Carlson	√				300 00	300 00
		797	C. L. Huston Co.	√				20 00	20 00
		798	T. Hughes	√				160 00	160 00
		799	V. J. Seward, Inc.	√				85 00	85 00
	9	800	Arbor Supply Co.	√	52		15 00	620 00	605 00
		801	Globe Display Co.	√				170 00	170 00
		802	R. M. Blakey	√				15 00	15 00
		803	S. P. Hutton	√				120 00	120 00
						1,040 00	45 00	4,030 00	5,025 00
								(120)	(30)

If it is assumed that checks are issued only in settlement of liabilities previously booked the entries in the unclassified debit column are restricted to charges to liability accounts other than those included in accounts payable; on the other hand wherever payment is assumed to represent the first recognizable stage of the transaction

the accounts representing the cost of the goods or services involved will be represented among the unclassified debits. The credit unclassified column in the example (page 244) is used for discounts or other special adjustments. Where liabilities are regularly established on the books at gross invoice prices a special column for purchase discounts can be used to advantage. If liabilities are booked consistently at net prices, and checks are issued only in payment of recorded liabilities, there is no occasion for unclassified columns in the check register.

The single bank column in the examples is illustrative; a separate column would be required for each active bank account. If, however, the number of distinct bank accounts on which checks are regularly drawn is large, it will be desirable to use a separate check register for each such account, or small group of such accounts.

Posting the check register is accomplished along the lines previously described for other types of special journals. All entries in the unclassified columns must of course be posted in detail. If desired the debits to specific creditors' accounts may be posted through the register instead of from underlying papers.

In another type of check register columns are introduced for deposits and bank balances, which facilitates the computation of the balance on hand continuously or as often as desired. If this is done, however, it is advisable to treat the deposits column in the check register as a memorandum column, not to be posted. As explained in the preceding chapter depositing is essentially a part of the process of receiving and can be conveniently recorded through the receipts journal, especially where the general cash account is used as a clearing account to which all receipts are charged and all deposits are credited.

Where checks are prepared by machine the duplicate checks can serve as a check register and a daily total of all checks drawn, distributed by general-ledger accounts affected, may then be recorded in a summarized disbursements journal.

Imprest Funds. It was stated above that all disbursements should be made by check except in the case of payments through imprest funds. The need for one or more such funds in the typical enterprise arises out of the fact that it is inconvenient if not impossible to avoid using currency for certain types of expenditures. Payments for post-

age and tax stamps, for example, usually must be made in the form of actual cash, and those furnishing incidental supplies and services also often desire payment in cash. Further, a fund of office cash is almost a necessity in most concerns as a source of currency with which to meet emergency calls for traveling expenses and other special requirements.

Under the imprest system the fund is established by drawing a check on the bank account for an agreed upon amount—ranging from $25 to $500, or even more, as the circumstances dictate—the cash so secured being placed under the control of a particular employee. From the fund thus created the cashier in charge makes disbursements from time to time upon proper authorization. As a means of validating his expenditures the petty cashier should be required to obtain a receipt or some form of voucher to support each payment from the fund. If this is done the amount of cash on hand plus the disbursements shown by the vouchers will at all times equal the specified amount of the fund. In this connection a standard form of receipt (see illustration below) can often be employed to advantage.

RECEIPT FOR CASH EXPENDED

Amount *$19.50* Date *7/5/50* No. *14*

To *E. D. Cook*

Description		
For railway ticket—Chicago	√	*9.50*
Cash advance	√	*10.00*
	√	*19.50*

Approved	Receipt Is Hereby Acknowledged
J. H.	*E. D. Cook*

Replenishing Imprest Funds. From time to time, as his fund runs low, the cashier is reimbursed for the actual expenditures made from the fund as shown by his accumulation of receipts or other mem-

oranda. The petty cashier transmits his receipts to the head cashier or to the treasurer, accompanied by an itemized statement or summary voucher (sometimes prepared on the back of the special form of envelope or jacket used to hold the individual receipts or vouchers). A check is drawn for the precise amount of outlays reported, the proceeds being turned over to the cashier to replenish his fund. The amount of the replenishing check, under the most common procedure, is charged not to impress cash but directly to the various expense accounts and other types of accounts represented by the reported disbursements made by the cashier. Where this plan is followed the fund account in the ledger always stands at the stated amount and appears to be entirely inactive. If it is desired to record the ebb and flow of the amount of cash in the fund the amount disbursed, as shown by the cashier's vouchers, must be credited to the fund account, the concurrent charges being to the expense accounts or other accounts affected, and the amount of the replenishing check will then be charged to the fund. This procedure has the advantage of more completely reflecting in the ledger records the successive processes of making payments and replacing the amounts expended. It can also be defended on the ground that it conforms to the adjustment required at the close of each accounting period. On the occasion of preparing financial statements, in other words, all imprest funds must be examined and the amount of all expenditures to date of statements as shown by the accumulated vouchers must be credited to fund accounts and charged to the proper accounts, and there may be no need for replenishing the fund at this point.

Assume, for example, that an office cash fund of $100 is established under the control of the petty cashier, from which he is authorized to make disbursements under prescribed conditions. Under either procedure the entries reflecting the creation of the fund, in skeleton journal form, are as follows:

Office Cash	$100	
Bank		$100

These entries are recorded in the check register or other form of disbursements journal. Assume, further, that the petty cashier has instructions to present his statement of expenditures and supporting vouchers whenever the fund falls below $20 and that his first report shows expenditures of $82. A check would then be prepared for the

precise amount disbursed, and the cash would be drawn from the bank and turned over to the cashier to restore his fund. Under the first procedure described above the entries recording this act of replenishing, would be as follows:

Office Supplies	$ 82	
(and other accounts affected)		
Bank		$ 82

Under the second procedure indicated the required entries would be:

(1)

Office Supplies	$ 82	
(and other accounts affected)		
Office Cash		$ 82

(2)

Office Cash	82	
Bank		82

It is worth noting that where expenditures from the imprest fund typically are chargeable to a number of accounts the acceptance of the abridged procedure makes the recording of the replenishing checks in the check register a space-consuming operation. It is of course possible to record replenishing checks through the general journal or some other medium, restricting the check register to checks drawn in favor of outside parties.

Imprest Cash Register. The cashier in charge of imprest cash, as has been pointed out, must accumulate receipts or other papers supporting his expenditures in detail, and must furnish these evidences and a classified recapitulation of the same to his superior when applying for funds to make good his disbursements. In addition the petty cashier should maintain a systematic and permanent record of cash received and disbursed. This record, the "petty cash book," may range in form from a very simple page with two money columns to a more or less extended special-column sheet, as the circumstances require. The form on page 249 is illustrative.

In this example but one special column is provided in the distribution of charges, all other charges being recorded in the unclassified column. The purpose is merely to suggest the possible use of special columns in this connection. In preparing the summary voucher of expenditures to be submitted with the receipts or other underlying papers it is of course necessary to make a complete analysis of the disbursements to provide a basis for entry in the regular cash book or

other form of journal record employed. This summary can be prepared from the petty cash book, or directly from the underlying memoranda. If the latter procedure is followed the petty cashier's report should be checked against the petty cash book before being transmitted to the head cashier.

If desired the petty cash book can be used as a journal from which debits to the various accounts affected by the disbursements can be posted. In the illustrative form, for example, the total of the special column for office supplies could be posted directly to the account indicated, and the charges in the unclassified column could be posted

PETTY CASH BOOK

Date		Rec. No.	Payee	Description	Fund Dr.	Fund Cr.	Distribution Office Supplies	Distribution Unclassified Acct.	Distribution Unclassified Amt.
July	5			Check #468	100 00				
		1	Postoffice	Stamps		10 00	10 00		
		2	Buckeye Co.	Carbon paper		5 00	5 00		
	6	3	Railway Express	Express charges		5 00		234	5 00
	7	4	R. E. Osborne	Advance		30 00		261	30 00
	8	5	Postoffice	Stamps		5 00	5 00		
		6	Acme Supply Co.	Stationery		5 00	5 00		
		7	Harry Boyd	Janitor		10 00		246	10 00
	9	8	Railway Express	Express charges		12 00		234	12 00
					100 00	82 00	25 00		57 00
				Balance		18 00			
					100 00	100 00			
				Balance	18 00				
				Check #512	82 00				

individually to the accounts indicated by the account numbers given. The total of the credit fund column, in this case $82, would then be posted to the fund account in the ledger. The debit fund column, on the other hand, would not be posted, as the drawing of checks to establish or replenish the fund would be journalized in the check register and posted therefrom. It is to be noted that where the petty cash book itself is employed as a posting medium the scheme of entries conforms to the second of the two procedures for recording the replenishing checks outlined earlier.

Payroll Disbursements. The disbursing of funds to meet payrolls is a very important cash operation, and care must be taken in this

connection to develop a procedure which will prevent or minimize irregularities. This is particularly true of the large enterprise, where the number of employees may run into the thousands.

Payroll payments are commonly made in the form of actual cash or by bank checks. Special time checks, payable in cash at the paymaster's office or from pay cars, are also sometimes issued to employees. The amount to be paid on the particular date is determined from the payroll sheets or other types of payroll records. In making up the rolls it is often necessary to take into account special deductions for pension funds, purchases by employees, stock subscriptions, taxes, etc.

Where payment is made in the form of currency it is necessary to draw a check upon the appropriate bank account, payable to the paymaster or other disbursing officer, for the entire amount to be disbursed. Before drawing the cash a tabulation of the payroll should be made to determine the amount required in each of the various denominations, and a change list prepared to be submitted to the bank. The payroll check is then cashed and the pay envelopes are made up and delivered to the employees. In large concerns mechanical devices are often employed in counting money and in filling the envelopes. Care must be exercised in distributing the envelopes to see to it that they reach the proper parties. Under one system each worker must be identified in the presence of his foreman when he receives his envelope, and the foreman as well as the paying clerk must sign the payroll sheet. Another common means of identification is to provide each employee with a metal plate or check bearing his payroll number. Provision should be made for having each employee sign the payroll or some form of receipt.

A system of paying by check has distinct advantages, not the least of which is the greater control secured. On the other hand this method of meeting payrolls is not always satisfactory to the rank and file of employees, and it throws a considerable burden on the bank. Where payment is made by check it is advisable (in the case of large companies) to establish a special bank account sufficient to cover the entire payroll and to draw the individual checks on this account. The work of drawing the checks can be reduced by the use of check-signing machines or stamped signatures, properly controlled. Copies of the lists of checks drawn, showing names of payees and amounts, are sometimes submitted to the bank. Salary payments, as opposed

to ordinary wage disbursements, can be readily made by check, as a relatively fixed and short list of names is involved and identification is usually not a matter of great difficulty.

The tasks of preparing the payroll and the making of payments should be in separate hands. Where the rolls are compiled in one department and actual disbursements are handled by another department the danger that the rolls will be padded or otherwise improperly prepared is much reduced, and if changes are made in the sheets after they have been forwarded to the paymaster they can be easily discovered by comparing the rolls as paid with the copies retained by the accounting department.

Payroll procedure is further discussed in Chapter XV.

Branch Receipts and Funds. If the branch office receives cash from cash sales or makes collections on account the total cash received should either be remitted to the main office daily or should be deposited daily in a local bank to the credit of the home office, to be remitted as desired. In either case the branch manager should make a daily report of sales and receipts to the treasurer at the main office. If a branch bank account is used a receipted duplicate deposit slip should be forwarded with the daily report. No withdrawals from the branch bank account should be made except for the purpose of remitting to the main office.

Branch cash funds from which disbursements are made should ordinarily be handled under the imprest system, and should be kept entirely separate from funds accumulating for transfer to the main office or for deposit. Payment of bills by a branch should as a rule be restricted to small items requiring immediate attention; all other bills should be forwarded to the home office.

Bank Reconciliation. A regular feature of cash control is the reconciliation of the balance shown by the bank statement submitted at the end of the month (or other period) with the balance of the bank account appearing in the general ledger at the same date. The statement balance regularly differs from the account balance because of outstanding checks (checks issued but not yet received and paid by the bank). Another common cause of difference are late deposits which have been charged to the ledger account but not yet recorded by the bank. There may also be adjustments required of the ledger account because of bank service charges, deposited checks which have

proved to be uncollectible by the bank, and other special conditions. Errors in keeping the account or errors made by the bank represent still another possible source of difference.

The standard process of reconciliation includes listing and examination of returned checks and comparison of these checks with debits on bank statement, comparison of record of deposits with deposits shown by statement and listing of deposits not yet recorded by the bank, and listing of outstanding checks. Adjusting entries must be made for any differences such as service charges that represent actual decreases in the bank balance which have not been reflected in the accounts. The final step is the preparation of a reconciliation schedule. The following indicates the form of such a schedule:

M COMPANY

Bank Reconciliation, December 31, 1949

Balance per statement, Dec. 31				$26,500
Deposit Dec. 31, not in statement				1,200
				$27,700
Outstanding checks, Dec. 31:				
No.	*Date*	*Payee*	*Amount*	
408	12/20/47	S. R. Moak	$ 50	
417	12/24/47	L. T. Rozar	27	
428	12/28/47	Rogers Co.	320	
431	12/30/47	Crane & Cork	160	
435	12/31/47	R. O. Simes	113	
436	12/31/47	Alston Co.	615	
437	12/31/47	Thomas Co.	205	1,490
				$26,210
Service charges deducted in December				5
Balance per ledger, before adjustments, Dec. 31				$26,215

A variation in procedure is to make adjusting entries necessary to record any special deductions shown by the bank statement and then reconcile the statement with the adjusted ledger balance.

Where large numbers of checks are issued it may be desirable to make arrangements with the bank to have paid checks returned weekly, or even daily.

Cash Statements. Attention has been called to the need for daily reports of receipts, periodic bank statements, schedules of imprest fund expenditures, and other routine cash statements. In addition there is usually prepared at the end of each month or other significant period a comprehensive statement of receipts and disbursements

and cash position—a treasurer's report. The following example is illustrative.

UNITY BAKING COMPANY
Statement of Receipts and Disbursements
and Cash Position
Month Ended December 31, 1949

Cash balance, opening of business, December 1:			
On hand (including imprest fund vouchers)		$ 1,000	
In bank		30,000	$31,000
Receipts			
Collections:			
Customers' accounts	$38,000		
Notes, including interest	1,500	$39,500	
Cash sales		7,500	
Sale of real estate		4,500	
Bank loans		7,000	
Miscellaneous receipts		1,530	
Total receipts			60,030
			$91,030
Disbursements			
Trade creditors accounts		$28,000	
Other current accounts		2,000	
Payrolls:			
Factory	$13,000		
Selling	6,500		
Office and administrative	7,500	27,000	
Taxes paid		2,000	
Notes retired, including interest		3,500	
Office expenses		1,500	
Miscellaneous disbursements		1,005	
Total disbursements			65,005
Cash balance, December 31			$26,025
On hand		$ 950	
In bank		25,075	
		$26,025	
Decrease in cash balance during December			$ 4,975

Cash Requirements. Cash enters into virtually all business operations at some stage, as it is the only generally accepted asset which may be used in discharging obligations. No concern, therefore, can conduct its business without cash. With banking and credit machinery and monetary habits as they now exist it is feasible to operate without keeping a large stock of actual currency in strong boxes or otherwise, but it is necessary to maintain adequate bank balances.

In the first place such balances are required because of the lack of day-to-day correspondence between cash receipts and cash outgo; in most cases it is not expedient to attempt to proceed on a hand-to-mouth basis with respect to cash. Further, banks require the maintenance of reasonable balances as a necessary condition of financial accommodation; the general business public demands a respectable cash status as a condition of extending confidence; the possibility that a credit stringency will develop makes even an exceptional cash position something to be commended. At the same time it is clearly unwise to permit cash funds to accumulate in excess of a reasonable interpretation of needs. The goal of sound management in connection with cash should be the development of conditions of capitalization, methods of collection and payment, dividend policies, use of temporary investments, and plans with respect to expansion which will tend to insure both an adequate cash position and the most effective possible use of the cash resources available.

The normal daily balance of unrestricted cash required will naturally vary with the size and general nature of the business, and with seasonal conditions within the particular concern. Where receipts from day to day are regular and fairly dependable, as in the case of many public utilities, the building up of cash reserves to meet ordinary current obligations is not necessary, although the accumulation of large sums to meet special demands for cash will still be required. On the other hand where receipts fluctuate widely, and do not synchronize with disbursements for materials, payrolls, etc., as is the case in many manufacturing and construction lines, larger cash balances are regularly needed and funds must be made available to meet disbursements during periods of unusually lean receipts.

Cash Budgets. The cash budget is a cash forecast and program. It has no stereotyped form, but it includes an estimate of receipts by various classes during a month or other stated period, together with a classified statement of obligations to be met within the period and a scheduling of disbursements. It may be in the form of a balanced statement or it may show an excess of receipts over requirements or vice versa.

Scheduled estimates of ordinary receipts are based primarily upon sales programs and probable collections, data which are in turn drawn in considerable measure from the records of past performance. Receipts in the form of interest, rentals, and other miscellane-

ous earnings can usually be accurately estimated in the light of the resources and activities which produce such items. Collections of notes and similar credit instruments can be readily scheduled in terms of due dates, allowance being made for anticipated renewals and bad debts.

Estimates of disbursement requirements for a given period are drawn in part from the record of outstanding and maturing accounts, notes, and other obligations. Consideration must also be given to the additional liabilities which will have to be incurred and met within the period as a result of the purchasing and production program. The amount of cash required to meet payrolls and other current costs is estimated on the basis of the various departmental operating budgets.

In budget forms provision is usually made for a month-by-month comparison of budget figures and actual receipts and disbursements.

Careful cash budgeting is evidently a matter of marked importance in any financial program. Without such planning sound administration of cash activities, and of operations in general, is impossible. And it may be added that the preparation of estimates and schedules of receipts and expenditures is greatly facilitated where adequate cash records are employed and an effective system of procedure and control with respect to day-to-day activities has been developed.

Questions

1. What is the essential nature of business cash? List the principal forms. What is meant by the statement that the most important kind of business cash is a type of "receivable"?

2. List and describe the three main types of cash accounts. How would you record a borrowing of cash from a bank which was immediately treated as a deposit and was not received by the borrower in the form of actual money?

3. Why is a system of cash control of marked mportance? What is meant by internal check in this connection? What is the role of the treasurer in connection with cash administration?

4. List the principal classes of cash receipts and disbursements.

5. Under what circumstances are mechanical registers an important device in handling actual cash? Outline the day-to-day procedure required in connection with the use of registers.

6. Outline and illustrate the "ticket system" of controlling and recording cash receipts.

7. Outline the "invoice system" of handling receipts from cash sales.

8. Discuss the control and recording of collections on account: (1) when payment is made by the customer in person, and in part at least in the form of actual currency; (2) when payment is made through the mails and is largely by check.

9. What special features of handling collections are found in the case of hotels and similar institutions?

10. Describe the procedure involved in depositing receipts.

11. What rules with respect to receipts and disbursements are the essential basis for the control of expenditures? Describe the process of issuing checks.

12. What is meant by the "voucher system" in connection with disbursements?

13. Describe the check register and its use.

14. Describe the imprest system of handling office funds, including a discussion of: (1) the need for the system; (2) the procedure required in establishing the fund; (3) the process of replenishing. In connection with (3) outline the two alternative methods of recording replenishing checks and cashier's vouchers.

15. Describe the petty cash record and its use.

16. Outline the process of making and recording disbursements to meet payrolls.

17. How should branch office funds be handled?

18. Explain the need for periodic reconciling of bank account and bank statement.

19. List the principal types of cash reports.

20. Discuss the question of cash requirements. Is a bank balance an "unproductive" asset? Explain.

21. What is meant by the cash budget? How is it prepared?

XIV

CURRENT COSTS AND PAYABLES

Incurring Costs. The incurring of cost is a major type of business transaction in all forms and fields of enterprise, and a very considerable part of the volume of bookkeeping and accounting work in most business offices revolves around the handling of costs—their original recognition and their subsequent tracing and disposition. Moreover, as already indicated, an important element in the total of asset values which may be said to inhere in or attach to the particular business enterprise at a given moment of time is that represented by those cost factors whose contribution to operation or production, in terms of realized revenues, has not yet been fully rendered.

Considered in detail there are many kinds of costs necessary to the activities of the typical enterprise; nevertheless the entire range of cost factors can be comprehended under a few main groupings. In the first place there are what may be called the "fixed-asset" costs, represented by such commitments as land, buildings, and equipment of various types. All commodity costs—materials, supplies, merchandise—fall into a second broad division. A third group includes service costs, such as ordinary labor, administration, selling, utility service, and so on. The accounting procedure employed in dealing with costs naturally varies from group to group. At the same time it is well to bear in mind that the economic significance of a service cost factor to the business enterprise is fundamentally no different from that of a cost element represented by a tangible object such as an item of merchandise or a piece of machinery (in themselves essentially "congealed" services), and that the treatment of all costs in relation to effect upon income and financial position should be harmonious in broad outline.

Costs may be incurred on either a cash or a credit basis. That is,

cost factors may be paid for approximately at the moment of physical acquisition (or at whatever other occasion represents effective impinging upon the enterprise and hence requires acknowledgment), or payment may be deferred until some more or less distant future date or dates, as agreed upon by the contracting parties. Under present-day practice incurrence on a credit basis is the dominant case; hence the treatment of current payables or liabilities is intimately associated with the recognition of costs. Indeed, the disadvantages of dealing with costs on a cash basis are so great, particularly in the matter of the development of effectively controlled procedures, as to induce many concerns to adopt the policy of treating all costs as incurred on a credit basis, even in cases where payment is made almost immediately.

In this chapter and the next attention is directed to current costs—cost factors whose stay in the business is relatively short—and the related liabilities.

Materials, Supplies, Merchandise. The costs of raw materials, factory supplies, office supplies, store and shipping supplies, and salable merchandise are of especial importance in accounting procedure because such charges are represented by a relatively large number of transactions in each period. These cost factors are commonly acquired on open account, although in some instances notes and other forms of liabilities arise in this connection. (Minor charges are also often incurred on a cash basis, through imprest funds.) The procedure employed varies with the size and nature of the concern. In general, purchasing procedure includes four main steps or stages, ordering the goods, receiving, recording the cost and liability, making and recording payment. The cost of goods acquired is clearly stated as a rule, subject to the complication of discounts and allowances. The effective initial cost includes all charges legitimately incurred in placing the commodities in the storesroom of the buyer. In other words, the costs of transportation and receiving are as much a cost of materials and merchandise as the invoice price itself, and should be dealt with accordingly to the degree that this is feasible.

Ordering and Receiving. Following the general planning or scheduling of purchases, the first stage in purchasing procedure consists of ordering. In some organizations a purchase requisition or request to order is issued when it has been observed by the "balance-

of-stores" clerk or other appropriate person that the stock of a particular class of goods is running low, or has reached a definitely determined "minimum point." One copy of the purchase request is sent to the purchasing department, and one copy is retained by the department making the request, or by the storesroom if the requisition originates there. The form given on this page is a simple example of the purchase requisition. In situations where materials

Nº 37961 **PURCHASE REQUISITION** **Order No.** B8753

Date OCTOBER 15 194-

PURCHASING DEPARTMENT DETAIL

From AMES-JONES

F. O. B. DETROIT Terms NET

Acct. No. 83-536 Deliver Dept. 78

Amt. in Stores 2550
Amt. on Order NONE
3 Mo. Req. 7500
Last Order No. A234567
Last Price .500

Quantity	Size or Symbol	Description	Price
7500	24-904	KEYTOPS	.500

Requested by J. E. Brown
Approved J. E. B. Jones
TO PURCHASING DEPT.

Approved G. P. Smith
PURCHASING DEPT.

Printed in U. S. America

Form 3622—20M Sets-3-48-Factory (D5757)

and supplies are purchased in terms of requirements to fill specific orders the original request may be in the form of a "bill of materials" prepared by the production or planning department. Upon receipt of the purchase requisition the order is prepared and placed by the purchasing department. A standard order form (see illustration on page 260) should be used, although this need not be the same for all classes of materials or merchandise acquired in the particular enterprise and will of course vary between concerns. The original of the order is sent to the vendor and additional copies as needed are prepared and retained for the use of the various departments involved and for receiving and recording purposes.

In large enterprises the purchasing department may be an elaborate organization with special sections and units devoted to such functions as compiling quotations, carrying on negotiations with vendors, taking care of order changes, tracing orders, and the like.

In some concerns a separate "traffic" department is established to follow incoming shipments from date of shipment to receipt of goods.

PURCHASE ORDER

BURROUGHS ADDING MACHINE COMPANY • 6071 SECOND AVENUE, DETROIT 32, MICH.

THE NUMBER OF THIS ORDER MUST APPEAR ON ALL INVOICES, SHIPPING MEMOS, BILLS OF LADING, EXPRESS RECEIPTS AND PACKAGES.

Burroughs

PURCHASE ORDER B8753
DATE 10/20/4-
REQUISITION 37961
F. O. B. DETROIT
TERMS NET (SEE REVERSE SIDE)

TO AMES-JONES CO.
256 BARTON ST.
BUFFALO, N.Y.

PLEASE SHIP CHEAPEST WAY THE MATERIAL SPECIFIED BELOW AND SEND BILL TO PURCHASING DEPT. DETROIT, MICH. TRUCK DELIVERIES WILL BE ACCEPTED ONLY, MONDAY THROUGH FRIDAY BETWEEN HOURS OF 8 A. M. AND 4 P. M.

ACCT. NO. 83-536 DEPT. 78

QUANTITY	MATERIAL	PRICE
7500	24-904 KEYTOPS	.50C

R. L. Smith
BURROUGHS ADDING MACHINE COMPANY

THIS ORDER IS SUBJECT TO THE TERMS, CONDITIONS AND SPECIFICATIONS STATED ABOVE AND THOSE PRINTED ON THE REVERSE SIDE; ACCEPTANCE HEREOF BINDS YOU TO DELIVER THE MATERIAL ABOVE SPECIFIED IN ACCORDANCE WITH THE WHOLE OF THIS ORDER.

SHIP TO

FORM 397

Receiving procedure, like other techniques, must be adapted to the needs of the particular business; nevertheless there are standard features common to most cases, particularly among the larger stores

and plants. The receiving department (which may be a distinct organization or a section of the storeskeeping force) is responsible for receiving, unpacking, and inspecting merchandise and materials,

REC'D VIA TRUCK	CHGS.	NO. PKGS. 6	THEIR WEIGHT 150	DATE REC'D 10/15	DATE CKED 10/15
FRT.-EXP. PRO. NO. FRT	P/S NO.	CAR NO.	OUR WEIGHT 150		

REC'D FROM M.L. HARPER CO.
ST. LOUIS

PURCHASE ORDER	B12345
DATE	10/3
REQUISITION	33456
F.O.B.	DETROIT
TERMS	NET
ACCT. NO.	67-845
DEPT.	63

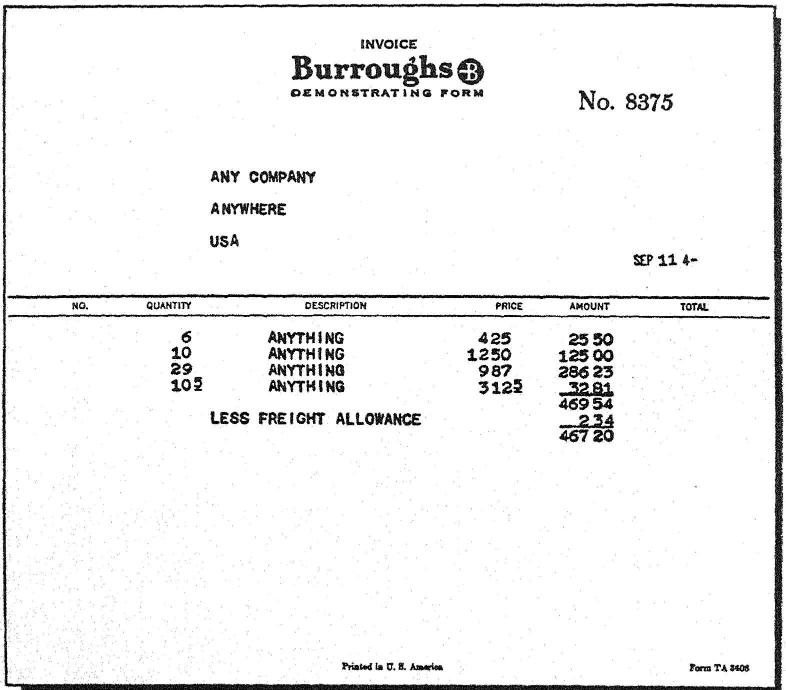
QUANTITY	MATERIAL	PRICE
25,000	MEDALLIONS	3.00G

REC'D BY R.H. REC'D BY J.J. CHECKED BY C.J.

BURROUGHS RECEIVING REPORT

and for accepting or rejecting same. This work includes careful checking of incoming shipments against purchase orders. It is the further duty of the receiving department to prepare reports of goods

received in terms of individual consignments and purchase orders, and—in some cases—each day's business. According to one authority five copies of the receiving report are needed for the typical situation, one each for the purchasing department, the traffic department, the balance-of-stores clerk, and the accounting department, in addition to the copy retained by the receiving department. See illustrative form on page 261. The receiving department may also find it desirable to maintain a chronological record of receipts in the form of a receiving book or register.



INVOICE

Burroughs

DEMONSTRATING FORM

No. 8375

ANY COMPANY
ANYWHERE
USA

SEP 11 4-

NO.	QUANTITY	DESCRIPTION	PRICE	AMOUNT	TOTAL
	6	ANYTHING	425	25 50	
	10	ANYTHING	1250	125 00	
	29	ANYTHING	987	286 23	
	105	ANYTHING	3125	32 81	
				469 54	
		LESS FREIGHT ALLOWANCE		2 34	
				467 20	

Printed in U. S. America

Form TA 3408

Recording Purchases. The principal document which forms a basis for recording purchases of materials or merchandise is the vendor's invoice. (The form given on this page is illustrative.) When the invoice comes in it must be carefully checked against the purchase order and receiving report before recording. Under some routines a standard supplementary form is prepared in triplicate to facilitate checking and recording. One copy of this form, properly approved,

goes to the accounts-payable section of the accounting department for recognition of liability and initiation of payment, and a second copy goes to the stores department to supply the necessary data covering material or merchandise costs.

Some form of specialized purchases register or journal is employed by a great many concerns. As explained in Chapter XII such a journal may be elaborated through the introduction of special columns for important divisions of materials or merchandise departments. Another development is the subdivision of the purchases journal into a number of separate registers, one for each main department of activity. The vouchers payable register, discussed in Chapter XV, may be viewed as a purchases journal designed to cover all costs incurred on a credit basis, including service costs and fixed-asset costs as well as charges representing materials or merchandise.

In concerns employing many detailed cost accounts it is often necessary to prepare recapitulation sheets, based on underlying documents, in connection with summarizing and posting costs of materials and other operating charges.

In terms of simple journal entries the purchase of materials or merchandise on account simmers down to the following:

Materials	xxxx	
(also stores ledger accounts)		
Accounts Payable		xxxx
(also specific vendor's account)		

Legal Basis for Recording Purchases. From a legal point of view the passing of title generally constitutes the proper occasion for the recognition in the accounts of the cost of goods acquired and the liability thereby incurred. That is, merchandise purchased becomes the property of the buyer, and hence may properly appear upon his books, when the title to the goods becomes vested in him. The passage of title, however, is a highly technical matter and it is not always clear, in the chain of circumstances making up a transaction, at precisely what point the transfer of ownership occurs. Goods are ordered, prepared, shipped, received, paid for, utilized. Just when does title pass? Each case must be settled on its merits; no one rule or standard can be applied to all instances. But this does not mean that the conditions of each transaction must be referred to a legal expert for judgment. In general, and in the absence of evidence to the contrary, it is expedient to assume that goods are effectively

acquired when received, and to make entry accordingly. What is needed is some convenient, orderly method, not inconsistent with sound legal and business standards, of booking purchases, and the actual receipt of goods on order furnishes the most satisfactory basis for such a method.

The general soundness of the rule of receipt does not justify adherence to this rule in all cases. Where, for example, goods have been ordered, paid for in whole or in part, and set aside or segregated by the vendor for disposition as requested, it may be sound to recognize the costs and liabilities involved, although delivery has not yet been effected. Further, there are cases where title is deemed to pass upon consignment by vendor to a common carrier, and in these circumstances it may be expedient to record goods in transit on the buyer's books especially where it is desired to complete all accounting on a legal basis at the close of the fiscal period.

Circumstances occasionally arise under which goods are received but remain the property of the vendor until prescribed conditions have been met.

Discounts on Purchases. In the case of credit purchases the buyer is very frequently offered "terms"; the buyer is confronted, in other words, with two (or more) prices associated with specified dates of payment. If settlement is made within a stated minimum period the "net" price is paid; if settlement is delayed beyond this period an alternative "gross" price becomes effective. The purpose of the vendor in giving terms, of course, is to encourage the buyer to pay promptly, so that the amount of working capital required to carry accounts may be held within reasonable bounds and the danger of failure to collect minimized.

In writing the invoice the vendor often uses the gross amount, the net price being indicated only through the terms offered. Under a variation of this procedure the amount of the discount is calculated and shown on the face of the bill. As will be explained shortly this practice is somewhat unfortunate from the standpoint of the development of a sound interpretation and treatment of discounts.

The common rates of discount offered for early cash payment range from one to five per cent of the gross amount; the discount period is usually for five, ten, or fifteen days, and runs from the date of the invoice. Conventional abbreviations are often used in stating the terms. The expression "2/10, n/30," for example, indicates that

the stated gross amount may be reduced by two per cent if payment is made within ten days, that thereafter the gross amount is owed, and that in any event the account must be paid within thirty days from the date of the invoice. Occasionally the stated terms include more than one rate of discount. For example, a particular purchase may be payable 3/5, 2/10, n/30.

Interpretation of Discounts. In view of the emphasis on gross price in the writing of the typical invoice it is not surprising that under the most common treatment of purchases the materials or merchandise accounts are charged with gross invoice costs and discounts taken are credited to a special account, "purchase discounts." With respect to the nature of this special account there has been much dispute among accountants. According to one view the amount of discounts taken ("earned") is an item of financial gain and should be included in the income account at the end of the period. The proponents of this position argue that discounts are in effect a form of interest earned on working capital, and as such are entitled to treatment as an income item. Under the principal alternative position purchase discounts taken are viewed as adjustments of what would otherwise be overstated cost figures.

It seems clear that purchase discounts taken, in the great majority of cases, should be interpreted as deductions from nominal costs. If the granting of such discounts were an unusual and special occurrence, and only concerns with an unusually favorable financial position could take advantage of the opportunity to pay net prices, there would be some justification for the other view. But as a matter of fact the offering of cash discounts has become a widespread and commonplace feature of business procedure, and the acceptance of such discounts has likewise become a commonplace, to be taken for granted in any well-managed concern. In other words, the real price is regularly the *net cash price,* and the matter is so understood by both parties. If it were not for the practice of listing and billing in terms of gross price it would presumably never occur to any bookkeeper to do otherwise than book the net price. It follows that there is much to be said for a change in practice in bill writing at this point. If invoices were written in terms of net cash prices, the original record of costs would as a matter of course be on the net basis, and there would be no occasion for the use of a discounts account and no problem of periodic cost adjustment. It can be argued, moreover, that if

the emphasis were shifted to net prices, with the amount of the *penalty* for delayed payment clearly indicated, the regular acceptance of discounts by the buyer would be encouraged even more than it is under the procedure now generally prevailing. A commendable compromise—followed, for example, by some public-utility companies—is found in the practice of writing bills in such manner as to show gross charge, amount of discount, and net amount, with the last figure prominently displayed.

Certainly no actual income arises through the acceptance of a conventional discount. Sound buying coupled with prompt payment of bills does not in itself justify recognition of profits. One of the most widely held canons of accounting is the doctrine that in general realized earnings cannot arise prior to sale of completed product and to treat purchase discounts as realized profits is an outright violation of such doctrine. Indeed, if discounts accepted are an earning a concern with large purchases and no sales whatever in a particular period might appear to be operating at a profit. Further, if discounts allowed for prompt payment in the case of current costs may be rated as earnings it would seem to follow that discounts so allowed in connection with the acquisition of fixed assets are likewise income—an obviously absurd position.

Since net prices are in general the effective costs it is good business for the buyer to take advantage of all cash discounts offered; in fact it is scarcely going too far to say that in most lines it would not be possible to remain in business long if the costs incurred were on the basis of gross invoice prices. In some instances the total of purchase discounts during a year has exceeded the total net income for the period. In the case of the terms 2/10, n/30, for example, a rate of thirty-six per cent per annum is involved. (Two per cent for twenty days—the difference between the discount date and the final payment date—amounts to approximately thirty-six per cent per year.) To avoid neglecting such a discount, evidently, the procedure of auditing and preparing invoices for payment must be expedited, and the necessary funds should be borrowed if they cannot otherwise be made available. From the standpoint of the alert vendor, it may be added, the customer's failure to take discounts regularly is one of the most dependable signs of a poor credit risk.

Recording Discounts Taken. As already indicated it is common practice to charge materials or merchandise accounts with gross

prices, discounts taken then being credited to a special account. Suppose, for example, that the M Co. buys a bill of materials at a gross price of $1,000, subject to a discount of 2% if payment is made within ten days of date of invoice. Upon receipt of the goods and checking of the invoice the general-ledger entries required are as follows:

Materials	$1,000	
Accounts Payable		$1,000

Upon payment of this bill, within the discount period, the following entries are made:

Accounts Payable	$1,000	
Bank		$ 980
Materials—Purchase Discounts		20

The account showing discounts taken should be interpreted as a contra to the main materials account and the ideal treatment at the end of the period is to close the amount of discounts to the main account. Assume, for example, that the total of discounts taken applicable to materials for a particular period is $500, the appropriate closing entries are:

Materials—Purchase Discounts	$500	
Materials		$500

This treatment assumes that no part of the gross cost of materials has previously been transferred to work in process or cost of sales and it ignores the complications which may arise as a result of the division of materials cost into departmental accounts and stores ledgers.

It would of course be possible to charge materials with the gross cost on the occasion of booking the invoice and adjust such cost directly, without the use of a supplementary account, when the bill is paid and the discount taken. Such a practice, moreover, would have the special merit of closing the door to possible later misinterpretation of the discount element. On the other hand the use of the special account is clerically convenient under some conditions.

Lapsed Discounts—Gross-Price Procedure. Aside from the difficulties resulting from the introduction of nominal gross prices into the cost records the procedure illustrated above is objectionable in

that it fails to provide for the isolation of discounts lapsed or neglected. The amount of discounts taken is not a particularly significant fact; with proper office procedure and sound financial administration all discounts should be taken. On the other hand the amount of discounts lapsed through failure to pay bills promptly, if any, may be said to represent a special financial loss which should not be buried in the recorded cost of materials or merchandise.

To segregate lapsed discounts under the gross-price procedure it is necessary to go over the bills with discount dates falling within the current period to determine the amount lapsed and to charge a loss account and credit the offsetting discount account with the amount so determined. If, for example, it is found that a discount of $25 on a particular bill for materials has been neglected the following entries would be in order:

Loss from Lapsed Discounts	$25	
Materials—Purchase Discounts		$25

In the income statement the amount of discount lost should ordinarily be reported as a special expense and not as a part of materials cost.

Recording Outstanding Discounts. Under the gross-price procedure it is desirable to make an adjustment for outstanding discounts at the close of each significant period. How this may be done can be indicated by a simple example. The M Co., during its first period of operation, buys materials on account to an amount of $100,000, gross price, and $98,000, net discounted price. The discount rate of 2%, it will be assumed, is applicable to each invoice. During the period bills to the amount of $85,000, gross, and $83,300, net, are paid, all applicable discounts being taken. The amount outstanding at the end of the period, accordingly, is $15,000, gross, and $14,700, net. The adjusting entries at this point, on the basis of the expectation that advantage will be taken of all available discounts on outstanding bills, are as follows:

Accounts Payable—Allowance for Outstanding Discounts . .	$300	
Materials—Purchase Discounts.		$300

The special allowance account represents a contra to the recorded amount of outstanding accounts payable and should be handled accordingly in preparing the position statement. The individual ac-

counts with vendors need not be disturbed on account of this blanket adjustment. The credit to the purchase discounts account places the amount of the adjustment of nominal cost figures on an accrual basis. In the following period, as the bills involved are paid, the allowance account, rather than the discount account offsetting costs, should be credited for all discounts taken on accounts unpaid at the end of the preceding period; and if any accrued discounts are allowed to lapse the amount thereof should be credited to the allowance account and charged to a special loss account showing neglected discounts.

Application of Discounts. Where original charges to materials or merchandise are based on gross invoice prices, and unit prices are available in terms of gross rather than net figures, it is evident that the application of purchase discounts taken or to be taken to classified stores records or to departmental costs cannot be made in detail without considerable difficulty. To determine correct inventories and departmental operating results, in this situation, the amount of discounts applicable to each class of purchases and to each department must be estimated and the estimated amounts applied to the appropriate figures for gross cost at the close of the fiscal period. In this way a general purchase discounts account can be divided and allocated to particular cost elements without encountering the practical difficulties which would arise if this were attempted in terms of discounts attaching to specific invoices.

To illustrate the entries involving application of discounts assume that the M Co., during its first period of operation, acquires materials at a gross cost of $100,000 and net cost of $98,000 and that the gross cost at the end of the period, after recognition of production cost of delivered product, is distributed in materials, work-in-process, finished goods, and manufacturing cost of sales accounts in the amounts of $20,000, $15,000, $10,000, and $55,000, respectively. These gross costs should now be adjusted by applying the total discount of $2,000 thereto. Assuming a single department of activity, and that discounts apply uniformly to all material costs, the appropriate general-ledger entries are:

Materials—Purchase Discounts	$2,000	
Materials		$ 400
Work in Process		300
Finished Goods		200
Manufacturing Cost of Sales		1,100

If there are two or more departmental groups of cost accounts the first step, of course, is the allocation of the total discount to the departments.

Where it is not considered expedient to apply discounts to departmental costs it is still possible to treat them as an adjustment of cost of sales and inventories for the business as a whole, rather than as an item of income.

In some stores, to encourage the buyers to secure large discounts, the practice is followed of "loading" each department with a standard rate of discount as an element in merchandise cost, the discount actually secured then being assigned to the department as an earning. From an accounting standpoint this procedure is not to be recommended.

Net-Price Procedure. For example, the M Co. buys materials in various lots and from a number of vendors at a total gross invoice cost of $100,000. A uniform discount of 2% is offered on all invoices for cash payment in ten days. In making payments advantage is taken of all discounts offered except in the case of a single shipment amounting to $2,000, gross, and $1,960, net, in which case the discount is allowed to lapse and it is necessary to pay the gross amount as a result. The following scheme of general-ledger entries shows the nature of the net-price procedure:

(1)

Materials	$98,000	
Accounts Payable		$98,000
To record invoices at net price		

(2)

Accounts Payable	96,040	
Bank		96,040
To record payment of bills amounting to $98,000, gross, and $96,040, net, discounts taken		

(3)

Accounts Payable	1,960	
Loss from Lapsed Discounts	40	
Bank		2,000
To record payment of bill amounting to $2,000, gross, and $1,960, net, discounts lapsed		

Where more than one rate of discount is offered by the vendor the net price is to be found in general by deducting the first and highest rate of discount from the gross amount of the invoice. The true cost of the goods, in other words, is the first cash price available.

The reasonableness of this interpretation is supported by the fact that the difference between the first and second rate of discount offered is almost invariably so substantial that a failure to pay within the first discount period is out of the question in any properly managed enterprise.

The net-price method has distinct advantages. It places the record of costs at the outset on an actual cash basis, and thus avoids all necessity for adjustments as bills are paid. With this method, moreover, there is no occasion for accruing outstanding discounts as an offset to costs and payables at the close of the period and no problem of applying discounts to departmental charges or other cost subdivisions. The procedure also has the advantage of automatically isolating neglected discounts, if any, in the case of all bills paid during the period. On the other hand lapsed discounts attaching to unpaid bills at the end of the period are brought to light only if an adjustment is made. For example, if an examination of outstanding accounts in a particular situation shows that discounts amounting to $20 have been permitted to lapse the following entries are in order:

Loss from Lapsed Discounts	$20	
Accounts Payable		$20

By these entries, evidently, the accrued loss is recognized and the additional liability booked. It should be remembered that here as elsewhere entries in the controlling account, accounts payable, must be accompanied by entries in the particular creditors' accounts affected.

Interest on Accounts Payable. Where accounts payable draw interest under specified conditions it is necessarv to adopt a procedure by which interest is systematically recorded throughout the period and is accrued on outstanding obligations at the close of the period. The ideal treatment during the period is to accrue the charge and recognize the increase in liability in full in every case on the date of payment (or as of such date). The M Co., for example, buys merchandise at an invoice cost of $5,000. The account is due 70 days from date of invoice, with interest at 6% accruing for the last 60 days of this period. It is understood, moreover, that the account can be settled at any time on the basis of face amount plus interest accrued to date of payment. The M Co. makes payment in full on the due date.

Under these conditions the general-ledger entries necessary to reflect the entire situation on the debtor's books are:

(1)

Interest Charges	$ 50	
Accounts Payable		$ 50
To accrue the interest for 60 days		

(2)

Accounts Payable	5,050	
Bank		5,050
To record payment		

If payment were made forty days from date of invoice, for example, the entries would be the same except for a change in the amount of interest. The amount of interest must be recorded, of course, in the proper account or accounts of the subsidiary ledger as well as in the control and the use of a supplementary controlling account is always somewhat inconvenient.

If purchase and payment occur within a single period it would be possible to record the interest as a cash charge, without passing the amount through the liability account. With this treatment the foregoing entries would be abridged to:

Interest Charges	$ 50	
Accounts Payable	5,000	
Bank		$5,050

In any event the amount of interest accrued at the end of the period must be set up as an income charge, with a corresponding increase in outstanding payables.

Purchase Returns. Materials and merchandise purchased are not infrequently returned to the vendor for one reason or another. In some cases goods are bought with the understanding that unsold balances may be returned; goods are sometimes returned because of damage in transit due to faulty packing or other reasons; returns also may arise because the order has been incorrectly filled or the merchandise as received is otherwise unsatisfactory.

If the goods returned have not been booked prior to date of consignment to vendor no formal accounting entries are required (assuming that the vendor has no enforceable claims or, at any event, does not offer objections to this outcome). If the goods returned

have previously been recorded as a credit purchase, and the invoice has not yet been paid, the usual procedure upon consignment is to charge the vendor's account for the appropriate amount (as determined by the previous credit thereto), the concurrent credit being lodged directly in the materials or merchandise account or in a special contra account, purchase returns. If payment has been made prior to the date of return—a somewhat unusual situation—the same

BURROUGHS ADDING MACHINE COMPANY
CREDIT MEMORANDUM
DETROIT, MICHIGAN

Date OCTOBER 15, 194- № 40109

S.E. JONES & CO.
4826 HAMMOND AV.
DETROIT, MICH.

CREDIT ON PREPAID SERVICE AGREEMENT MACHINE #1 234 567
TRADED IN OCTOBER 5, 1948 8.24

Joe Blocka
Service Mgr.

Printed in U. S. America

Form 26¼—3M-8-46-Acctg.

procedure should be followed, but in this case the charge to the vendor's account represents a special type of receivable rather than a deduction from an amount payable. The claim against the vendor in this situation may be collected in cash or may be absorbed in connection with the settlement of other invoices from the same party.

Where the return of goods involves negotiations with the vendor, a conservative course is to postpone making entries until a credit memorandum has been received (see illustrative form on this page). In the event that it is impossible to effect a settlement which is fully

satisfactory to the buyer an item of expense (or loss) will presumably be involved. This may amount to packing and transportation charges, in whole or in part, or it may include a part of the cost of goods as such. Assume, for example, that the M Co. buys materials on account from the R Co. to the amount of $1,000 and after recording this shipment but prior to making payment therefor returns goods to the vendor, freight charges collect, amounting, at cost prices, to $200. Upon consignment of the materials to the R Co. the following entries are made:

R Co.	$200	
Materials (or Materials—Returns).		$200

After some exchange of correspondence it is agreed between the parties that the M Co. must absorb half of the transportation cost on returns, totaling $20, which has been paid by the R Co. The following entries would be in order when this agreement is reached:

Cost of Returns (or other appropriate title)	$10	
R Co.		$10

Where purchase returns are at all numerous special forms may be employed in dealing with such transactions. If desired such forms may include a specialized journalizing medium.

Purchase Allowances. Allowances are sometimes granted by the vendor because the goods received are not fully satisfactory with respect to kind, grade, or some other feature. A particular buyer, moreover, may receive rebates or price adjustments on account of the volume of his purchases, or for some other reason. Wherever such allowances arise, following recognition on the buyer's books of the original stated price, an adjustment of the creditor's account is necessary with a corresponding credit to the cost of materials or merchandise directly or an indirect credit through the use of a special offset account.

The M Co., for example, buys a bill of materials from the R Co. amounting to $2,000. After shipment is made but before the goods are received a sharp recession in prices occurs, the amount applicable to this shipment being $200. Upon receipt the M Co. records the invoice at the billed amount, $2,000. Before the bill is paid, however, an effort is made to secure a concession and the R Co. finally

agrees to grant a special allowance of \$150. Upon reaching this agreement the appropriate entries on the M Co.'s books are:

R Co.	\$150	
Materials (or Materials—Purchase Allowances)		\$150

Where substantial "trade discounts" from list prices are allowed (either as a means of revising published prices or to make concessions to large buyers), and the invoice is written accordingly, there is no occasion for the purchaser to charge his cost accounts with amounts based on the nominal prices. And even if the amount of the discount is shown on the face of the invoice it is poor practice to base entries in the accounts on the gross list prices. The trade discount rate is seldom less than ten per cent, and there is no excuse for padding costs, even temporarily, with such allowances.

Costs of Transportation and Handling. Transportation is clearly an element in the cost of materials and should be accounted for as such. Such treatment follows automatically in all cases where the invoice price is set at a level to cover transportation charges, which are then prepaid by the vendor. Where, however, freight and other carriage costs are not represented in the invoice cost, and are paid for separately by the buyer (payment normally being made directly to the railway or other agency furnishing the service), such costs are often charged to a distinct operating account and the relationship of this account to the cost of materials or merchandise is not always properly recognized.

In cases of large purchases of a single class of goods, to which particular transportation charges may be readily applied, the ideal practice is to include the additional cost in the account to which is charged the invoice cost of the goods, the concurrent credit being to an account with the transportation agency (assuming the cost of delivery service to be handled as a credit purchase). Assume, for example, that the M Co. buys a shipment of coal from the Virginia Co. with an invoice cost of \$1,500 and that the freight bill on this shipment, payable to the Eastern Railway Co., amounts to \$400. The Virginia Co.'s invoice would be booked as follows:

Fuel.	\$1,500	
Virginia Co..		\$1,500

To set up the freight charge, on account, the following entries would be in order:

Fuel	$400	
Eastern Railway Co..		$400

If payment to the common carrier is made at once by check, without recognition of the liability, the credit would of course be to the bank account.

In many situations, on the other hand, freight bills and other transportation charges apply to a number of classes of materials or merchandise, represented by several stores accounts, and it may not be convenient, if otherwise feasible, to make a precise apportionment. In this event it may be desirable to charge an undistributed transportation cost account for all such costs as incurred, this account being later assigned on the basis of careful estimates of the applicability of transportation charges to the various departments or classes of goods.

Costs of receiving (including delivery services furnished by the buyer's own organization), unpacking, handling, and storing, are likewise logically chargeable as additional costs of materials or merchandise, and should be divided between periodic cost of sales and inventory balances in accordance with the division accorded to net invoice costs. However, there are numerous practical difficulties in the way of precise assignments of such costs to subsidiary classes of goods, or even to the main controlling accounts, and consequently many concerns make little effort to trace the effect of these collateral charges in terms of materials or merchandise costs. Especially is this true of such general storing costs as heat, light, and insurance.

The question of the treatment of the costs of handling and storing raises the whole problem of the internal tracing and classification and reclassification of costs. This is the field of cost accounting, of particular importance in manufacturing, and is beyond the scope of the present discussion.

Accounts Payable. In the narrowest usage the term "accounts payable" may be restricted to trade creditors' accounts, liabilities created through the purchase of materials, merchandise, and supplies on account. In the broadest usage the term includes, in addition to trade accounts, virtually all unpaid bills or invoices, such as freight

bills, water and light bills, telephone bills, advertising invoices, repair bills, and so on. Accrued liabilities, such as wages, interest, royalties, and rent, are seldom referred to as accounts payable.

Among small concerns in particular are still found numerous examples of very unsatisfactory methods of recording and handling accounts payable. Often the invoices are allowed to accumulate without systematic treatment or recognition until time of payment. Such a practice leads to errors, retards the accounting for costs, involves neglect of discounts, and yields no current record of liabilities. Further, it is quite impossible to prepare a proper position statement or a statement of operations under such conditions without assembling and recording all outstanding obligations. As has been explained, the standard and recommended general practice is to record the cost and recognize the liability upon receipt of the goods and the audit of the invoice in connection with such receipt; and where there is any doubt as to the proper occasion for entries it should be remembered that to be too early in accounting for costs and liabilities incurred is in general less objectionable than to be tardy. The entry to the individual creditor's account can be made directly from the invoice, or a suitable form based on and accompanying the invoice, and the credit to the controlling account in the general ledger is taken directly from a recapitulation of such entries in the form of a columnar purchase journal or other specialized medium. In some situations, particularly where the number of invoices is not great, the most expedient procedure may be to post the entries to the individual creditors' accounts from the purchase journal or register rather than from the invoices or vouchers.

For the creditors' ledger, or group of ledgers, the loose-leaf system is usually more satisfactory than the bound volume. A standard form of ledger ruling suitable for either creditors' or customers' ledger is shown in Chapter IX. The visible card file is often employed in this connection. Under some systems a file of unpaid vouchers (see discussion of voucher system in next chapter) takes the place of a more formal creditors' ledger.

The debits to accounts payable representing payments are commonly secured from a columnar disbursements book or check register or—in the case of the individual creditors' accounts—from underlying forms. The nature and use of the controlling account in relation to the creditors' ledger was discussed in Chapter IX.

Questions

1. What are the three main classes of cost factors required by the typical enterprise? On what two financial bases are costs commonly incurred?

2. Outline the principal steps involved in ordering and receiving, including reference to the main special forms required.

3. Describe the process of recording purchases.

4. What is the legal basis for recording purchases? Is it always expedient to adhere rigidly to this basis? Explain.

5. Explain what is meant by "terms" in connection with credit purchases.

6. What are the two principal interpretations of purchase discounts taken? Discuss each view.

7. Illustrate the method of recording purchase invoices by which gross costs and discounts taken are recognized. How are lapsed discounts dealt with under this procedure?

8. Outline and explain a procedure designed to recognize outstanding discounts where the gross-price basis has been employed in initially recording purchases and payables.

9. Discuss the problem of applying discounts to departmental costs and to inventories.

10. Outline the net-price method of recording purchases and indicate the special advantages of this procedure.

11. With an example show how you would handle purchase returns.

12. Under what circumstances are special allowances sometimes granted by the vendor? What is meant by "trade discounts"?

13. Discuss the problem of dealing with costs of transporting and handling materials.

14. Define "accounts payable" and discuss the handling of such accounts from the point of view of ledger procedure.

XV

CURRENT COSTS AND PAYABLES—Continued

Voucher System. The term "voucher system" as used here refers to a formal scheme of dealing with the incurring of costs on a credit basis and handling disbursements on account which, with numerous variations among individual concerns, is widely employed by the larger enterprises. The system has a number of important general features. In the first place it involves the complete elimination of cash purchases of either commodities or services except as costs are incurred through petty cash or imprest funds which are set up and controlled as an integral part of the system. Second, it requires the formal recognition and vouchering of all bills payable, coupled with a controlled routine of effecting payments, the entire procedure emphasizing the authority of responsible officials. Third, it focuses attention upon the individual bill or invoice as the liability unit for accounting purposes, with a resulting tendency toward the substitution of voucher files for creditors' ledgers. Fourth, it includes systematic provision for the recognition and proper distribution of all costs incurred, the basic journalizing medium used in this connection being the voucher register (an inclusive purchase or cost journal).

Such a system has a number of merits. It encourages prompt and complete recognition of costs and of liabilities incurred, in the case of services as well as commodities; it eliminates improper or unauthorized disbursements; it tends to insure the taking of discounts. Moreover, the system—in some form—represents an essential element in any general plan of internal control and audit.

It should be understood that the voucher system may be extended to cover all expenditures, including dividend disbursements, payment of loans, etc., as well as transactions which involve the incurring of costs.

General Procedure under Voucher System. After the goods have been received and the invoice audited and checked, a voucher is prepared and passed to the party in authority whose signature authorizes entry and payment, at the proper time. The accounts to be charged are indicated either on the voucher itself or on a special distribution sheet. After the voucher has been audited and approved for payment it is entered in the journalizing medium, the voucher register. The audited voucher is then filed—assuming payment is not made immediately—in the unpaid voucher file. When due for payment the voucher is taken from the temporary file and is forwarded, with supporting documents attached, to the treasurer, who signs the check or pay warrant. Under some procedures the check is drawn, ready for signature, at the time the voucher is prepared. All checks must of course be recorded in the disbursements journal or check register. The practice of enclosing one copy of the voucher with the check with the request to the creditor that it be receipted and returned, is not as common as formerly. In this connection various forms of voucher checks are often employed. The most common type is that of an ordinary check with an informational section which is detached by the payee before depositing. After payment the vouchers are placed in the paid voucher file.

The voucher files may be arranged by vendors' names, alphabetically, or by voucher numbers. Under some systems duplicate vouchers are prepared which are filed alphabetically, while the original vouchers, with supporting papers, are filed by number. In connection with the temporary file it is necessary to provide dating tabs or other means of insuring that vouchers be withdrawn promptly for payment.

Voucher Register. The voucher register is essentially a *cost and current liability journal,* and in its most complete form it provides a means of distributing to the proper accounts all costs incurred by the enterprise, of whatever character. However, where factory costs or other types of charges are classified in considerable detail and are recorded in subsidiary ledgers, only the columns representing the controlling cost accounts can be employed to advantage in the voucher register. Division of the comprehensive voucher register into a number of specialized cost journals may be desirable in some cases. Thus the costs of materials and supplies may be recorded in one journal and the cost of employees' services in another. Develop-

ment of a number of journal rulings is always preferable to the use of an unduly elaborate and cumbersome form.

The ordinary voucher register or cost journal form includes: (1) spaces for date, voucher number, and other supporting data required; (2) money columns for the various special classes of costs recognized; (3) a column for all other charges; (4) an appropriate liability column. Provision may also be made for recording special credits and for indicating payments. The totals of the special cost columns are posted to the respective accounts in the general ledger. Posting to subsidiary cost ledgers is usually accomplished through supplementary analysis sheets on which provision is made for aggregating all charges to each underlying cost account. Entries in the unclassified debit column must be posted item by item to the accounts affected (and space for numbering or naming these accounts must accordingly be provided in the voucher register). The accounts payable—vouchers payable—column is posted in total to the liability account in the ledger; and no detailed posting is required in this connection unless it is deemed necessary to maintain some form of creditors' ledger in addition to the voucher file. Where it is desired to maintain formal ledger accounts for particular types of creditors a special column may be introduced which is credited with all vouchers drawn in favor of creditors in this group, and which is posted in detail to the accounts involved. The use of the formal account for the individual creditor is especially needed where numerous installments are paid on account and such payments do not match particular invoices.

On pages 282–283 is shown a form of cost journal prepared by machine, with accompanying miscellaneous distribution ledger sheet and remittance advice.

Periodic proving and summarizing of the voucher register is required, as in the case of other forms of journals. One feature of this work is the checking of the amount unpaid—as shown by the comparison of the payment notations and the entire amount vouchered—with the balance appearing in the liability account in the general ledger and with the unpaid vouchers file.

Discounts and Allowances under Voucher System. Where discounts from stated invoice amounts are allowed by creditors it is desirable that the vouchers be drawn for the net amounts, and that charges to costs be established on a corresponding basis. If this procedure is

PURCHASE

PREVIOUS BALANCE	DATE	REFERENCE		INVOICES	DEDUCTIONS	BALANCE	PROOF	
				.00				
254.10	JAN 9 4-	165	JAN 5	123.50		377.60	254.10	LEVY AND
55.20	JAN 9 4-	166	JAN 3	15.30				NELSON BR
		167	JAN 6	5.50		76.00	55.20	
172.75	JAN 9 4-	1276	RET		22.25-	150.50	172.75	PERRY-BRO
	JAN 9 4-	168	DEC 29	18.50		18.50		RANDOLPH
								RANDOLPH
4.20	JAN 9 4-	169	JAN 5	19.20		15.00	4.20	RENWICK A
8.25	JAN 9 4-	1290	RET		11.50-	3.25 CR	8.25	SCHUSTER
145.50	JAN 9 4-	170	JAN 4	16.00				SMITH SUP
		171	JAN 4	8.50		170.00	145.50	

REMITTANCE ADVICE

2026

JAN 10
DUE DATE

SMITH SUPPLY CO
14TH AND GRAND
ANYWHERE

DATE	REFERENCE		INVOICES	DEDUCTIONS	BALANCE
JAN 6 4-	83	DEC 30	125.00		
	84	JAN 2	25.00		150.00
JAN 8 4-	988	RET		4.50-	145.50
JAN 9 4-	170	JAN 4	16.00		
	171	JAN 4	8.50		170.00

ACCOUNT N

REFEREN

KINNEMAN
LORAINNE
DORSEY AN
SMITH SUP

Burr

Printed in U.

followed the voucher register shows net costs only and when payment is made vouchers payable is charged with the net amount through the check register. Then need for adjustment arises only when a discount is neglected and it is necessary to revoucher the account or to issue an additional voucher for the amount of the discount. Another procedure, useful only where it is deemed inconvenient to place costs on a net basis directly, consists of authorizing payment of the net amount, vouchers payable being credited, however, with the gross amount; then when the check is issued and recorded vouchers payable is charged with the gross amount and a

JOURNAL

NAME	ACCT. NO.	MISC.	DATE	A	B	C	D	E	F
		.00	JAN 9 4-	.00	.00	.00	.00	.00	.00
MALONE			JAN 9 4-		123.50				
OS			JAN 9 4-	15.30					
				5.50					
WN CORP			JAN 9 4-		22.25				
CO	33	1.10	JAN 9 4-						
CO	34	.40	JAN 9 4-				17.00		
ND WILLIAMS			JAN 9 4-	10.00		9.20			
CORP			JAN 9 4-		11.50				
PLY CO	84	16.00	JAN 9 4-						
					89.75	9.20	17.00	.00	.00
					128.50	18.50	26.75	13.90	17.35
					218.25	27.70	43.75	13.90	17.35

MISCELLANEOUS DISTRIBUTION LEDGER

AME INV DEPT K ACCOUNT NO. 84

SHEET NO. 1

ICE	ACCT. NO.	AMOUNT	DATE
AND SON	84	127.50	JAN 7 4-
CORP	84	4.00 -	JAN 7 4-
D BROWN	84	17.50	JAN 8 4-
PLY CO	84	16.00	JAN 9 4-

ughs

S. America

discount account is credited, through the check register. Under whatever procedure is followed care must be taken to avoid apparent authorization of payment of gross amounts and resulting tendency to neglect discounts.

Where goods are returned or special allowances are made between the date of vouchering and date of payment, the voucher as drawn must be corrected, or the original voucher must be voided and a new one issued. As previously pointed out, invoices should not be vouchered until the goods have been received and checked and the invoice audited, and further delay is required where there is marked

uncertainty as to returns and the final basis of settlement. In cases where allowances and adjustments are numerous and cannot be determined promptly it may be desirable to record such transactions in tentative form in a special journalizing medium, issuing vouchers later as the terms are settled. An alternative procedure is to employ columns for accounts payable or "unissued" or "unaudited" vouchers in the voucher register, such columns being credited when the transactions are first recognized and charged when the regular vouchers are issued, vouchers payable being then credited. In a few situations it may be expedient to handle certain types of purchases entirely outside the limits of the regular voucher routine.

Adjustments can be made in the voucher register in red or through the use of special columns whenever the amount of the voucher as originally drawn must be corrected, assuming that the error is discovered or the allowance agreed upon prior to date of posting. If the page affected has been posted memorandum notations may be recorded on the voucher register and the ledger accounts corrected by means of a special journal entry.

Special Problems under Voucher System. There is some difficulty in applying the standard voucher system to invoices payable in installments. Assume, for example, that equipment is purchased at a cost of $2,500, payable $500, down, and the balance in four equal monthly payments. It would be possible in this case to issue five vouchers, one for $500 covering the initial payment, for which a check would be issued immediately, and four for $500 each to cover the deferred payments. This would require, however, a division of the total cost among the several vouchers and this is somewhat inconvenient, particularly if more than one type of equipment, and hence more than one cost account, is involved. Probably the best procedure in such a case is to credit the total amount to an unvouchered liability account, crediting vouchers payable as vouchers are prepared and approved.

The conventional voucher procedure likewise requires some modification to fit situations in which purchases are made "on note," or in which notes are given by the buyer to apply on open accounts. If, for example, a unit of equipment is purchased at a cost of $2,000, a cash payment of $200 being made and an interest-bearing note given for the balance, the most convenient procedure—assuming that it is desirable to treat the original transaction as a credit purchase—

can be outlined as follows: (1) charge the equipment account and credit accounts payable (and the particular creditor's account) with the total cost of $2,000, using some journal medium other than the voucher register (unless such register is specially adapted for this purpose); (2) issue a voucher for the down payment, $200, recording same in voucher register as a debit to accounts payable and a credit to vouchers payable; (3) charge accounts payable and credit notes payable in the amount of $1,800 through the general journal; (4) when the note is due issue a voucher for the total amount including interest and record the same in the voucher register by debits to notes payable and interest charges (or interest payable, if the liability for interest has been previously accrued) and a credit to vouchers payable.

It is always unwise to attempt to apply a rigid procedure to situations to which the procedure is not suited. In most businesses liabilities will be incurred from time to time for which formal vouchers cannot be conveniently issued at the time the liability is recognized. This is particularly true of accruals of service costs, taxes, etc. between payment dates and cases where for some reason the precise amount of the liability cannot be immediately determined. All such situations can be readily handled by credits to ordinary liability accounts, followed by charges to such accounts and credits to vouchered accounts payable when formal approval of payment of a part or all of the liability becomes practicable.

For statement purposes, it may be added, the distinction between vouchered liabilities and other recognizable obligations is usually not stressed.

Consignment Accounts. Merchandise is sometimes "purchased" on consignment, to be sold for the account of the consignor. In such situations the "buyer" does not, in most cases, acquire title to the goods; he acts, rather, as an agent or factor for the actual vendor. A reasonable basis of handling such shipments, accordingly, is to make no regular accounting entries for the amounts received, limiting the records employed to informal accounts of physical quantities and sources of supply. Under this plan the accounting proper begins when sales are made (assuming no advances to consignor). At this time cash or accounts receivable is charged, the commission revenue account is credited, and the consignor's account is credited with the amount of the net proceeds under the contract.

Where consignments are regularly received at a fixed invoice price, and there is no expectation that any merchandise will be returned unsold, it may be desirable to handle the transaction substantially as a regular purchase, even if it cannot be said that the consignee has secured title to the merchandise. Under this plan the amount of the stated price is charged to an appropriately labeled merchandise account and is credited to the consignor's account. The sales of consigned goods are then credited to a special "sales" account, to which the proper portion of the merchandise charge is debited from time to time. When a particular consignment has been disposed of, or periodically, the consignor's account is charged with the commission. The consignor's account is also charged with all remittances made by the agent.

The M Co., for example, receives on consignment from the R Co., 1,000 units of a particular class of merchandise. The goods are invoiced to the consignee at a price of $5 per unit, and the agreement provides for sale at such price. Transportation charges are paid by the consignor. The agreement further provides that the M Co. is to meet all costs of selling and delivering, and is entitled to deduct a commission of 20% of total proceeds in remitting to the R Co. During the month in which the goods are received 800 units are sold for cash at the specified price, and the proceeds less commission are paid to the R Co. The following is a scheme of entries for the M Co.'s books:

(1)

Merchandise on Consignment	$5,000	
R Co.		$5,000
To record receipt of goods		

(2)

Cash	4,000	
Consignment Sales		4,000
To record sales		

(3)

R Co.	3,200	
Bank		3,200
To record remittances to R Co.		

(4)

R Co.	800	
Consignment Commissions.		800
To charge consignor with commissions		

(5)

Consignment Sales	4,000	
Merchandise on Consignment.		4,000
To close merchandise account to consignment sales in amount of goods sold		

The commissions account represents the actual revenue, on a legal basis, arising from consignment sales for the month. The costs of handling and selling the goods are of course assignable to this revenue. The balances of the special merchandise and R Co. accounts at this point should either be treated as mutually offsetting items and excluded from the M Co.'s statement or should be reported in the assets and liabilities with an accompanying explanation of the conditions.

Labor Cost. One of the most important cost factors in most enterprises is labor service. Broadly viewed this factor includes the services of receiving and stores clerks, factory operatives and other production employees, office and clerical workers, the sales staff, the shipping and delivery force, repair men, and all other employee groups. In dealing with labor cost in this sense a line is often drawn between those employees whose services are paid for in the form of monthly and other periodic salaries and those who are paid by the day or week, or by piece or other measure of physical performance, but the distinction is not of great importance aside from questions of routine procedure. A line is also often loosely drawn between services largely supervisory or which are characterized by mental effort and labor which is primarily physical, but again the division is one of little significance as far as the measurement of the effects of business operation is concerned. There is no essential difference in economic character and effect between the services of the typist in the office and those of the employee on the assembly line. And even in the case of administrative employees and officials, or professional services such as those furnished by the staff lawyer or the engineer, as compared with the efforts of "common labor," the contrast in the significance of the charges to the enterprise is not as great as is often assumed. All types of labor costs necessary to business operation have the same general relation to periodic revenues and to asset values.

The quantitative importance of labor cost, coupled with the fact that the relationship between the business enterprise and its employees is contractual, warrant the development of an accounting procedure for labor services which is as systematic and complete as is the treatment of the costs of materials and merchandise and the accompanying liabilities. Labor costs, of course, are not in general received in the form of separate and distinct shipments from a rather limited list of vendors, and represented by a series of invoices and

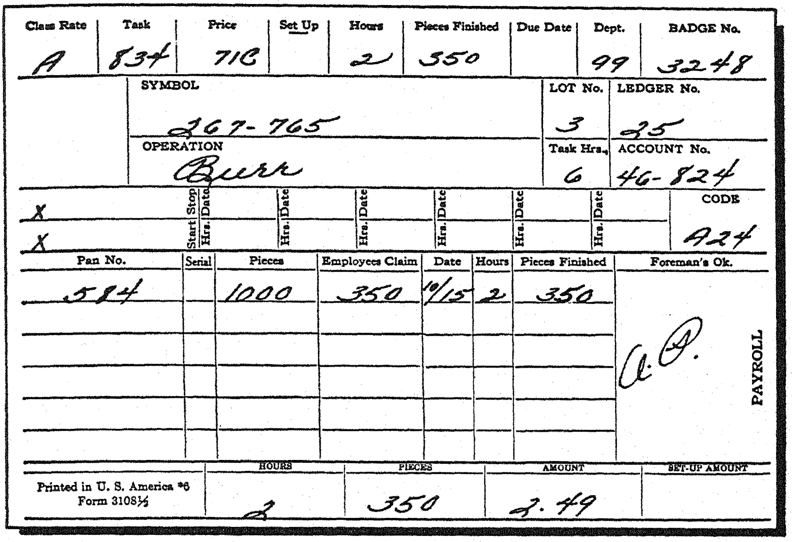
bills, as are goods costs. Instead personal services are furnished in a more or less continuous stream of activity throughout working hours, on the part of a relatively large group of persons, each of whom maintains a more or less independent relationship with the organization. Proper accounting for labor involves distributing the cost of the service furnished by all employees regularly to the appropriate accounts, recognizing the individual and total liabilities thereby incurred, and recording the discharge of such liabilities as wages and salaries are paid; and where there are many employees, and numerous types of agreements and modes of payment in effect, the effective accomplishment of these operations is no small task.

Accumulating Labor Charges. The first requirement of a proper procedure for handling labor costs is a systematic plan of recording the time of each employee. In very small concerns this may amount to nothing more than an informal noting of absences, overtime, and other variations, but in larger enterprises a definite timekeeping scheme is needed. A common arrangement involves the use of the time clock and a system of cards. The cards are usually kept in a rack near the clock, and when an employee enters or leaves the plant the card is inserted in the clock and the time is printed on the card by the recording mechanism. If wages are calculated purely on a time basis the clock cards themselves may furnish a sufficient basis for the compilation of the payroll, assuming that supervision within the plant is effective.

Where the entire time of the particular employee is devoted to furnishing a single type of service corresponding to a distinct cost account, and there is no occasion for breaking this cost down in terms of particular jobs or other units, the distribution of labor costs follows the regular classification of employees, and no reports of time distribution are required except where there are variations from the usual assignments. Where, however, the employee's time is divided among various tasks or jobs for each of which it is desired to determine costs, as is often the case in manufacturing, time reports must be systematically prepared showing the complete distribution of the worker's time each day. See illustration on page 289. Further, where wage payments are on a piece basis, or any other special basis, it is necessary to maintain a record of the worker's performance while in the plant.

As a rule time slips should be sent to the accounting department

daily, for calculation and tabulation. Here the charges to the various cost accounts are assembled and the amount of the liability to employees determined. The "in-and-out" clock cards constitute an important means of verification at this point. The wage amounts must also be classified by payroll numbers or names and by payroll dates, where payments are staggered. Large enterprises make considerable use of mechanical equipment in these connections. In



Class Rate	Task	Price	Set Up	Hours	Pieces Finished	Due Date	Dept.	BADGE No.
A	834	71C		2	350		99	3248

SYMBOL: 267-765 — LOT No.: 3 — LEDGER No.: 25

OPERATION: Burr — Task Hrs.: 6 — ACCOUNT No.: 46-824

X
X
Start Stop Hrs. Date — Hrs. Date — Hrs. Date — Hrs. Date — Hrs. Date — Hrs. Date — CODE 924

Pan No.	Serial	Pieces	Employees Claim	Date	Hours	Pieces Finished	Foreman's Ok.
584		1000	350	10/15	2	350	A. P.

PAYROLL

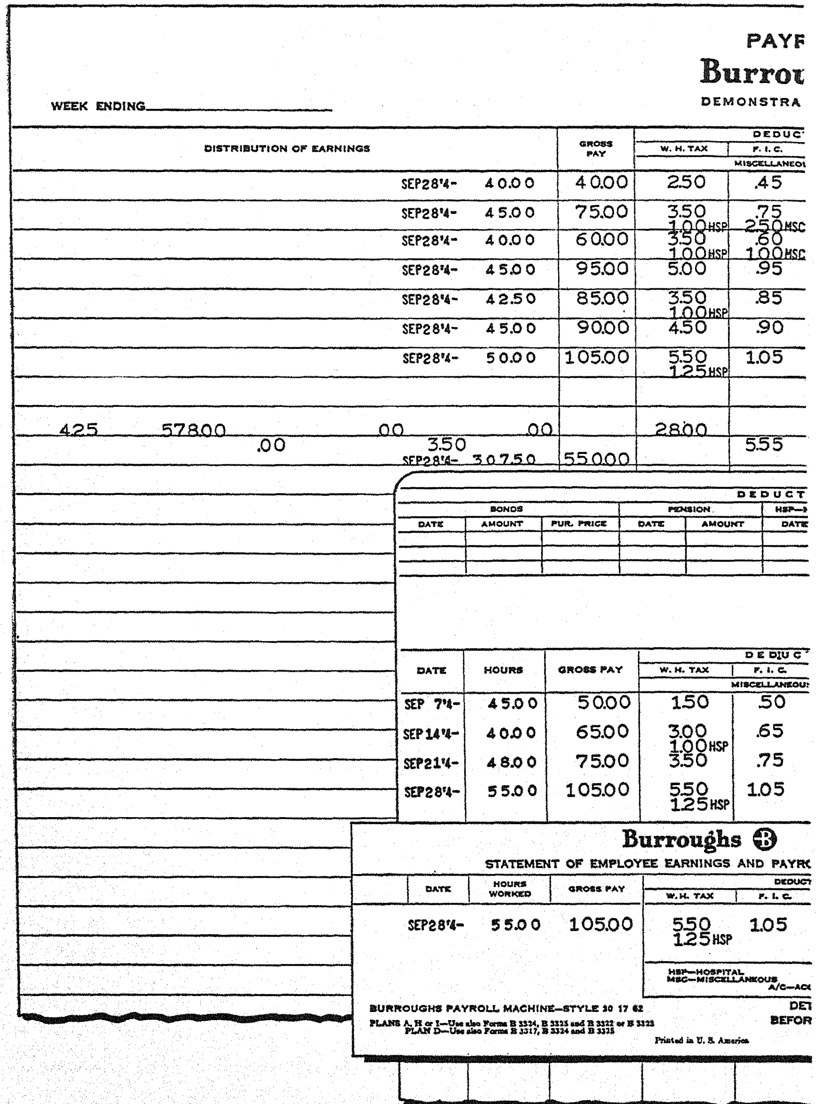
Printed in U. S. America *6
Form 3108½

HOURS	PIECES	AMOUNT	SET-UP AMOUNT
2	350	2.49	

some concerns the data required are transferred to punch cards (unless the original slips are in this form) to make possible the use of sorting and tabulating machines.

The charges for labor in terms of the general-ledger cost accounts may be set up through recapitulation sheets, special payroll journals, or through the voucher register, depending upon the particular conditions obtaining.

Payroll Procedure and Entries. On the basis of the clock cards, time slips, and slips showing deductions and advances (if any), the payroll sheets showing amounts earned by and due to each employee must be periodically prepared. In some concerns, and for some classes of employees, there is an underlying sheet for each worker; in other enterprises, or for other classes of employees, the data for a considerable group may be assembled on a single form. (See illustra-



PAYR

Burrou

DEMONSTRA

WEEK ENDING____________

DISTRIBUTION OF EARNINGS		GROSS PAY	DEDUC W. H. TAX	F. I. C. / MISCELLANEOUS
SEP28'4-	40.00	40.00	2.50	.45
SEP28'4-	45.00	75.00	3.50 1.00 HSP	.75 2.50 MSC
SEP28'4-	40.00	60.00	3.50 1.00 HSP	.60 1.00 MSC
SEP28'4-	45.00	95.00	5.00	.95
SEP28'4-	42.50	85.00	3.50 1.00 HSP	.85
SEP28'4-	45.00	90.00	4.50	.90
SEP28'4-	50.00	105.00	5.50 1.25 HSP	1.05
425 578.00 .00 .00 .00 3.50 SEP28'4-	307.50	550.00	28.00	5.55

DEDUCT

BONDS DATE	AMOUNT	PUR. PRICE	PENSION DATE	AMOUNT	HSP— DATE

DATE	HOURS	GROSS PAY	DEDUC W. H. TAX	F. I. C. / MISCELLANEOUS
SEP 7'4-	45.00	50.00	1.50	.50
SEP 14'4-	40.00	65.00	3.00 1.00 HSP	.65
SEP21'4-	48.00	75.00	3.50	.75
SEP28'4-	55.00	105.00	5.50 1.25 HSP	1.05

Burroughs

STATEMENT OF EMPLOYEE EARNINGS AND PAYR

DATE	HOURS WORKED	GROSS PAY	DEDUCT W. H. TAX	F. I. C.
SEP28'4-	55.00	105.00	5.50 1.25 HSP	1.05

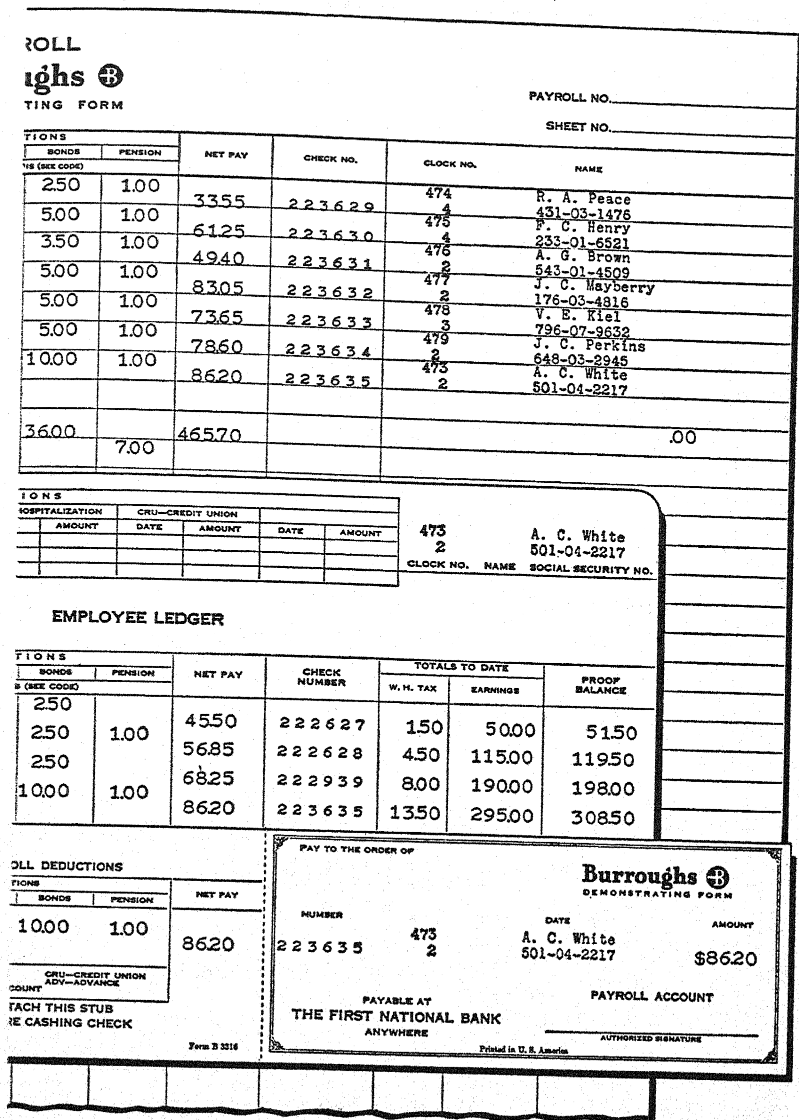
HSP—HOSPITAL
MSC—MISCELLANEOUS
A/C—AC

BURROUGHS PAYROLL MACHINE—STYLE 30 17 62
PLANS A, H or I—Use also Forms B 3324, B 3325 and B 3322 or B 3323
PLAN D—Use also Forms B 3317, B 3324 and B 3325

DET BEFOR

Printed in U. S. America

tions on pages 290–292.) Not infrequently both individual and summarizing records are used to advantage. In general the preparation of payroll data for employees receiving regular salaries is a comparatively simple matter.



ROLL
ughs
TING FORM

PAYROLL NO.
SHEET NO.

BONDS	PENSION	NET PAY	CHECK NO.	CLOCK NO.	NAME
2.50	1.00	3355	223629	474 4	R. A. Peace 431-03-1476
5.00	1.00	6125	223630	475 4	F. C. Henry 233-01-6521
3.50	1.00	4940	223631	476 2	A. G. Brown 543-01-4509
5.00	1.00	8305	223632	477 2	J. C. Mayberry 176-03-4816
5.00	1.00	7365	223633	478 3	V. E. Kiel 796-07-9632
5.00	1.00	7860	223634	479 2	J. C. Perkins 648-03-2945
10.00	1.00	8620	223635	473 2	A. C. White 501-04-2217
36.00	7.00	465.70			.00

HOSPITALIZATION AMOUNT | CRU—CREDIT UNION DATE AMOUNT | DATE AMOUNT

473 2 A. C. White 501-04-2217
CLOCK NO. NAME SOCIAL SECURITY NO.

EMPLOYEE LEDGER

BONDS	PENSION	NET PAY	CHECK NUMBER	TOTALS TO DATE W. H. TAX	TOTALS TO DATE EARNINGS	PROOF BALANCE
2.50		4550	222627	1.50	50.00	51.50
2.50	1.00	5685	222628	4.50	115.00	119.50
2.50		6825	222939	8.00	190.00	198.00
10.00	1.00	8620	223635	13.50	295.00	308.50

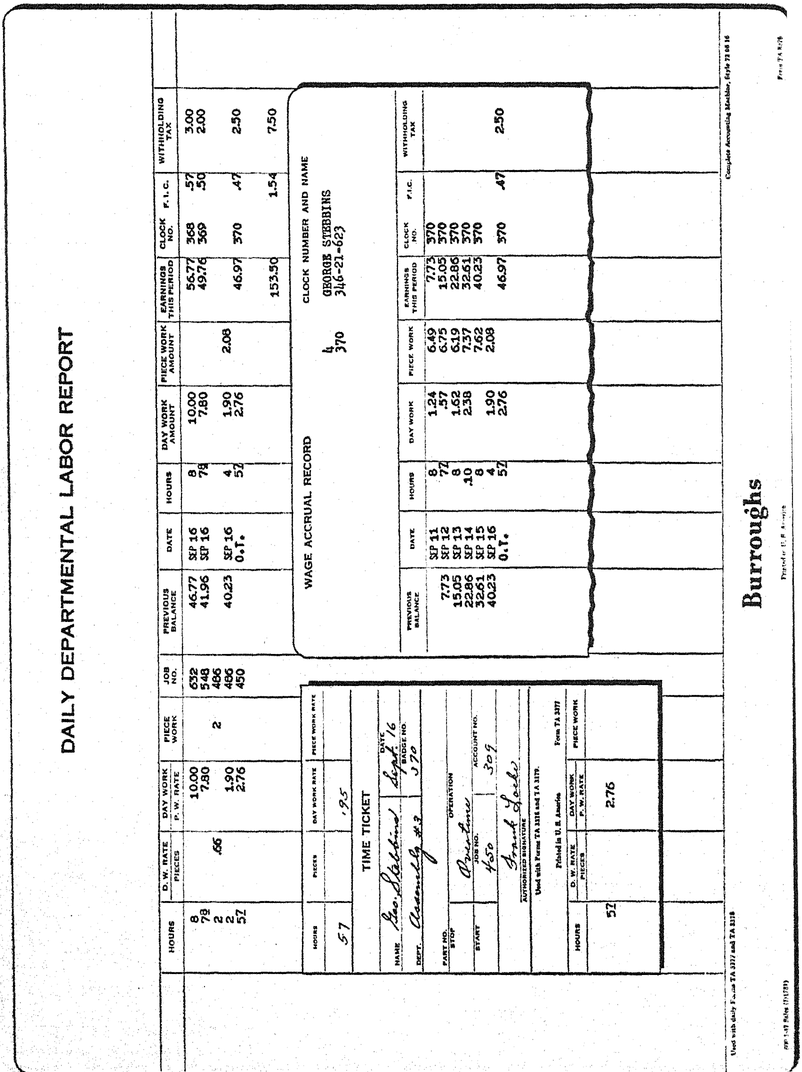
OLL DEDUCTIONS

BONDS	PENSION	NET PAY
10.00	1.00	8620

CRU—CREDIT UNION
ADV—ADVANCE
TACH THIS STUB
RE CASHING CHECK
Form B 3316

PAY TO THE ORDER OF
Burroughs
DEMONSTRATING FORM
NUMBER 223635 473 2
DATE A. C. White 501-04-2217
AMOUNT $86.20
PAYABLE AT
THE FIRST NATIONAL BANK
ANYWHERE
PAYROLL ACCOUNT
AUTHORIZED SIGNATURE
Printed in U. S. America

Payments are made in the form of actual cash or by bank checks. In many concerns some classes of employees (factory workers, for example) are paid in cash and other groups (salaried office employees, for example) are paid by check. The essential features of the pro-



DAILY DEPARTMENTAL LABOR REPORT

HOURS	D. W. RATE / PIECES	DAY WORK / P. W. RATE	PIECE WORK	JOB NO.	PREVIOUS BALANCE	DATE	HOURS	DAY WORK AMOUNT	PIECE WORK AMOUNT	EARNINGS THIS PERIOD	CLOCK NO.	F.I.C.	WITHHOLDING TAX
8		10.00		632	46.77	SEP 16	8	10.00		56.77	368	.57	3.00
78		7.80		548	41.96	SEP 16	78	7.80		49.76	369	.50	2.00
2	.66		2	486									
2		1.90		486	40.23	SEP 16	4	1.90	2.08	46.97	370	.47	2.50
57		2.76		450		O.T.	57	2.76					
										153.50		1.54	7.50

WAGE ACCRUAL RECORD

CLOCK NUMBER AND NAME

4
370

GEORGE STEBBINS
346-21-623

PREVIOUS BALANCE	DATE	HOURS	DAY WORK	PIECE WORK	EARNINGS THIS PERIOD	CLOCK NO.	F.I.C.	WITHHOLDING TAX
	SEP 11	8	1.24	6.49	7.73	370		
7.73	SEP 12	72	.57	6.75	15.05	370		
15.05	SEP 13	8	1.62	6.19	22.86	370		
22.86	SEP 14	10	2.38	7.37	32.61	370		
32.61	SEP 15	8		7.62	40.23	370		
40.23	SEP 16	4	1.90	2.08				
	O.T.	52	2.76		46.97	370	.47	2.50

TIME TICKET

HOURS	PIECES	DAY WORK RATE	PIECE WORK RATE
57		.95	

NAME Geo. Stebbins DATE Sept. 16
DEPT. Assembly #3 BADGE NO. 370
PART NO. OPERATION Overtime
STOP START JOB NO. 450 ACCOUNT NO. 309
Frank Locke
AUTHORIZED SIGNATURE

Used with Forms TA 3316 and TA 3379. Form TA 3377
Printed in U. S. America

HOURS	D. W. RATE / PIECES	DAY WORK / P. W. RATE	PIECE WORK
57		2.76	

Burroughs

Complete Accounting Machine, Style 73 06 16

Form TA 3376

Used with daily Forms TA 3377 and TA 3378

cedure involved in making disbursements to meet payrolls were outlined in Chapter XIII. In the effort to reduce the work involved, expedite the process, and insure accuracy, many special devices have been adopted by various enterprises. By staggering pay-days the work of the payroll department can be more evenly distributed, and where the number of employees is large this policy is well-nigh un-

avoidable. The importance of placing the tasks of preparing payrolls and of making disbursements in separate hands is widely recognized, as is the necessity for securing some form of receipt from the employee.

Credits to accrued payroll accounts (with respect to which the payroll sheets or registers are essentially subsidiary ledgers) are recorded through the same medium as is employed to set up the charges in the general-ledger cost accounts. If cost accounts are charged and payrolls credited outside the voucher register it may still be desirable to issue formal vouchers covering amounts approved for payment as of particular dates, the entries being a debit to accrued payrolls and a credit to vouchers payable. Where payments to workers are made in cash what amounts to the imprest system should be followed. That is, a check should be drawn for the amount of the payroll as vouchered, and the amount of the same should be charged to the payroll fund in the hands of the paymaster or other responsible party. Later, on the basis of receipted payrolls and unclaimed pay envelopes, the payroll fund must be credited and vouchers payable charged. The following scheme of entries is illustrative:

(1)		
Direct Labor	$20,500	
Factory Supervision		
(and other appropriate cost accounts)		
Payrolls		$20,500
To record costs incurred and accrued payrolls		
(2)		
Payrolls	20,000	
Vouchers Payable		20,000
To record vouchering of amount payable on particular date		
(3)		
Payroll Fund	20,000	
Bank		20,000
To record drawing of check in favor of payroll fund		
(4)		
Vouchers Payable	20,000	
Payroll Fund		20,000
To record discharge of liability and expenditure of fund on basis of paymaster's report as audited		

In practice the amount of payroll vouchered is the amount to be paid on the disbursing date, under the procedure followed by the employer, and this amount is usually less than the full accrued liability to date. On a particular payment date, of course, the dis-

bursement may in part cover the liability accrued in an earlier period, and exceed the cost incurred currently. In the foregoing entries it is assumed that there are no unclaimed wages.

Where payment is made to individual employees by bank checks the first two steps as illustrated would be unchanged, but the third and fourth would be contracted to:

Vouchers Payable	$20,000	
Bank		$20,000

A single voucher may be issued in this case as in the case where payment is made in cash, but the credit to the bank account would summarize the entire list of checks drawn. A special form of check register is useful in this connection and a special bank account is often employed for making payroll payments by check.

If the total of accrued payrolls is vouchered, and the voucher register is used as the initial journalizing medium, the use of the special "payrolls" liability account may be dispensed with. If there are charges to accrued payrolls for deductions of one kind or another, the payroll voucher must of course be drawn for the net amount. Numerous other variations in procedure are possible.

Unclaimed Wages, Advances, Deductions. Unclaimed envelopes in the paymaster's hands should generally be returned promptly to the cashier and the money should be redeposited in the appropriate bank account. Proper notations must of course be made on the individual records of the employees involved. Similarly the amount of checks issued to employees which have not been cashed should, after a reasonable time, be restored to the bank account. As a rule the amount of an unclaimed wage payment should be included in the amount due at the next payment date. Where wages remain unclaimed for some time, and the persons involved cannot be located, the amount of the liability should be closed to a special unclaimed-wages account. Wages remaining unclaimed for a period of years should be transferred to revenue or retained earnings, unless the law requires escheat to the state.

Wage and salary advances to employees—which should be made only under definitely restricted conditions—should be charged to a special account which is closed into accrued payroll when the services have been furnished and the advances thereby earned. Funds to take care of advances may be established in the paymaster's hands

through a special application of the imprest system. The fund is originally set up at an amount estimated to be sufficient to take care of advances between pay-days. On each pay-day the fund is provided with the full amount of the payroll, and when this amount less the advances has been disbursed, the fund again stands at the amount of the original deposit. Any amount of wages or salaries advanced or prepaid constitutes a form of asset for statement purposes.

Wage and salary deductions must be carefully handled in computing payrolls. If special deductions are payable to outside organizations, as in the case of insurance premiums, or contributions to retirement or "security" funds, these should be taken care of by charges to accrued payrolls (and proper adjustments of amounts due the individuals affected) and credits to appropriate liability accounts for the corresponding amounts due the outside organizations. Deductions covering sales of goods or services to employees must likewise be charged to accrued payroll. If such deductions have been previously charged to the employees' accounts, such accounts must of course be credited when the deductions are charged to payrolls; if the items have not been posted prior to the date of computing payroll, the credits to sales or other accounts affected must be made at this point. Another example is the deduction to cover employee subscriptions for bonds or other securities. In this case the special liability account credited represents the claim of the employee on the funds being accumulated for his account. The liability is discharged when the bonds are acquired and delivered to the employee. In this process it may be necessary to open up an account showing bonds held for delivery—an account which is preferably interpreted as a contra to the special liability account.

A major payroll deduction nowadays is on account of the Federal income tax on employees. The employer is required to withhold regularly from the employee's pay income taxes at prescribed rates and remit the funds withheld to the government.

Payroll and Related Taxes. Under Federal "social security" legislation employers in general are subject to taxes based on the total amount of wages paid during the calendar year (excluding payments to particular employees in excess of a specified amount per annum per employee). The tax is levied under two sections, with a credit under one section for contributions to state unemployment compensation funds. In addition the statute provides for taxes on em-

ployees matching the payroll tax levied on employers under one section. These taxes, like ordinary income taxes withheld, are collected by the employer in the form of a deduction from wages payable, and remitted to the government.

Returns of payroll taxes must be regularly filed with Federal and state governments, and numerous specialized records must be maintained. In addition the ordinary payroll records require some adaptation to meet the needs of the situation. As far as the general-ledger accounts are concerned the proper treatment is to set up the special liabilities for Federal taxes and contributions to state funds regularly in terms of wage accruals. For example, assume that in the M Co. the total charge for labor of all classes in a particular month is $20,500, the amount of Federal payroll tax (after taking into consideration any exemptions or credits) is $230, the amount to be collected and remitted to cover employees' tax is $180, and the amount due to state funds is $185. Assume further, that the amount of regular income tax on employees required to be withheld from this accrual is $970. The appropriate entries are:

(1)

Labor Cost (properly classified)	$20,500	
Payroll—Gross		$20,500
To set up total labor cost against gross payroll account		

(2)

Payroll—Gross	20,500	
Payroll—Net		18,935
Federal Payroll Tax Payable		230
Employees' Social Security Tax Payable		180
Liability to State Unemployment Fund		185
Employees' Federal Income Tax Withheld . . .		970
To distribute gross payroll credit		

In these entries charges for Federal and state levies are treated as a part of labor cost instead of being isolated as taxes—a disposition which seems sound in view of the general character of such levies and the manner in which they are calculated. If desired, however, the amount of the tax levied on the employer may be segregated as a special overhead cost.

Costs of Special Professional Services. Outside professional services, such as those furnished by auditors, engineers, lawyers, advertisers, and the like are acquired somewhat irregularly by the typical concern, and it is sometimes difficult to measure the amount of cost incurred and liability accrued as of a given date. This is particularly true of legal services, where often neither the extent of the engage-

ment nor the amount of fees can be approximated in advance or at the close of a particular accounting period during the course of the consultation and litigation. In all such situations it is important that liberal estimates of accruing costs be set up, period by period, special liability accounts, rather than accounts or vouchers payable, being credited. Then as definite bills are received the temporary and estimated liability account is charged and the ordinary type of liability account is credited.

For example, the M Co. pays a regular monthly retainer of $200 to Spence & Spence, attorneys, to cover the cost of routine legal matters such as preparation of contracts, investigation of titles, etc., and in addition pays special fees as billed whenever the firm represents the Company in a law suit or in any protracted negotiation. During a particular month the firm is made a party to a patent case and a considerable amount of preliminary work on the case is done by the lawyers. At the end of the month, however, no statement of account has been furnished to cover this work although one of the attorneys has estimated the total legal expense for the entire proceedings at $5,000, and the period required to reach a settlement at five months. The regular retainer is paid. With these conditions the appropriate entries are:

(1)

Administration Cost Control (Law)	$ 200	
Vouchers Payable (or, first, Spence and Spence) . .		$ 200
To record incurring of regular monthly charge		

(2)

Administration Cost Control (Law, or a special subsidiary account)	1,000	
Liability for Legal Cost—Patent Case		1,000
To record estimated accrued legal cost of patent proceedings		

If entries corresponding to (2) are recorded each month for five months, with no statement of account forthcoming from the attorneys in the meantime, the special liability account will show a credit balance of $5,000. Assuming, then, that the case is finally terminated in the sixth month and that a bill for special legal services is received totaling $5,300, the appropriate entries following the audit of the bill are:

Liability for Legal Cost—Patent Case	$5,000	
Administration Cost Control (Law)	300	
Vouchers Payable		$5,300

Where two or more accounting periods are included within the time in which an estimated liability for services is accrued, and the final amount of the charge differs considerably from the accrual, an adjustment of retainer earnings (preferably to be reported in the following income statement) is in order.

Commissions, Bonuses, Royalties. Commission costs arise particularly in connection with selling activities. The principal special problem arising is the measurement of the precise amount accrued as of a specific date. Where commissions are in no way contingent or conditional the amount accrued can be determined on the basis of reported performance. Where, on the other hand, an employee or agent is entitled to a higher rate of commission or to a special bonus if a specified level of output or sales is achieved, the amount chargeable is contingent until the period of determination is concluded. In all such cases, estimates of charges and liabilities must be made if interim statements are required.

Another case of contingent cost and liability is found where a part of the compensation of one or more members of the top management staff is contingent upon the amount of net earnings. Prior to the close of the year and the determination of the results of operation the amount of the charge cannot be determined, except as an estimate, and in preparing monthly or quarterly statements the hypothetical nature of the estimated charge and liability should be clearly indicated.

Where the cost of a service depends upon the amount of net income, and at the same time is a charge which must be included in operating expenses, the computation of the amount is facilitated by the use of equations. For example, assume that the president of the M Co. is paid a salary of $15,000 per year and in addition a bonus of 5% of net income after all expenses, losses, and other charges have been deducted, with the exception of income and profits taxes. Assume, further, that the net for the year computed as required, but subject to the amount of the bonus, is $50,000. With these conditions the additional compensation is calculated as follows:

Let x equal the amount of the bonus.
Then $50{,}000 - x$ equals the required net figure on which the bonus is computed.
Therefore,

$$x = .05\ (50{,}000 - x)$$
$$= \$2{,}380.95$$

If the agreement states that the net on which the bonus is to be based is after all income and profits taxes—with respect to which the bonus

itself is an allowable deduction—the computation is more complex but can be made through the use of simultaneous equations.

Royalty contracts usually provide for the payment of a specified amount per unit of output or a specified percentage of sales. The cost should be accrued periodically, like other charges, with appropriate recognition of liabilities. Where the royalty rate varies with the amount of annual sales the problem arises of estimating the applicable amount of cost in interim statements.

Rent and Insurance Costs. Where the right to use real estate or personal property is secured through lease rather than ownership the cost of the service, and the liability incurred on this account, must be systematically recognized. If the contract calls for rent payments at short intervals, such as the week or month, the entries during the period may be set up in terms of such payments, supplemented by a proper adjustment at the close of each accounting period; in cases where single payments cover a year or more it may be necessary, for purposes of adequate cost accounting, to establish a regular routine of accruals. Payment of rent in advance of receipt of service or use, a common occurrence, gives rise to a special type of asset, a form of receivable, which is chargeable to cost accounts as the use of the property is furnished to the lessee. Where there are a considerable number of contracts, with varying terms, the procedure involved in ascertaining and recording rent costs and payments may be sufficiently elaborate to justify the use of special forms and records.

For an example of a single lease applying to a particular class of property, with payment made regularly following receipt of the service, assume that the M Co. rents office space from the Packer Estate at a cost of $200 per month, payable semiannually on June 30 and December 31. With these conditions, and a monthly cost reckoning by the M Co., the following entries would be made on the lessee's books each month:

Office Cost Control (Rent)	$200	
Packer Estate (or Rent Payable)		$200

On June 30, for example, when a check is issued for rent for six months the following entries are required:

Packer Estate	$1,200	
Bank		$1,200

If the liability were vouchered on June 30 the specific liability account, Packer Estate, would be transferred to vouchers payable, in which case the entries on the occasion of payment would be:

(1)

Packer Estate	$1,200	
Vouchers Payable		$1,200

(2)

Vouchers Payable	1,200	
Bank		1,200

For an example of rent prepayment assume conditions as above except that the lease specifies that the rent is payable in advance semiannually, on January 1 and July 1. Under this form of agreement the entries on each payment date are:

Packer Estate (or Rent Prepaid).	$1,200	
Bank		$1,200

And the entries necessary to recognize the cost of service received each period are:

Office Cost Control (Rent)	$200	
Packer Estate		$200

Where a number of distinct agreements and lessors are involved the broad titles, "Rent Prepaid" or "Rent Payable" are appropriate for general-ledger purposes. Such accounts, however, must be supported by some form of record which shows the relation of the lessee to each contract and lessor.

In the case of insurance the service received by the insured from the insurer is not a technical factor which can be utilized in production; it consists rather of the complete or partial assumption by the insurer of the risk of loss through fire, injuries to employees, and other casualties and accidents. Payment is commonly made for considerable terms in advance, which makes it necessary to distinguish periodically between expired and unexpired insurance. Actual payment is usually made through the insurer's agent, and in some cases the agent may carry the acount for a limited period. The number of policies is often large, and a special form of register is a convenience in this connection. The insurance register is essentially a highly specialized type of subsidiary ledger.

The entries required in apportioning the cost of prepaid insurance follow the pattern illustrated above for prepaid rent. The cost of

insurance may of course be assignable to a number of departmental cost accounts.

Utility Service Costs. Utility services, such as gas, electric energy, telephone and telegraph, and water, are utilized in more or less significant amount by most business concerns. (Such costs are usually referred to as "services," even when represented by a tangible commodity such as water.) Costs of this class are billed regularly and can be recognized in terms of such billings, accruals being taken into account where necessary to complete the record for a given period. Monthly telephone charges for local service are billed in advance, and are payable before the service covered has been fully received. Ideally the amount prepaid should be set up as an asset, telephone service receivable, and should be transferred to telephone cost as the service is received, as in the case of rent or insurance prepaid. In practice, however, it is common to treat the entire amount as a cost incurred when the bill is vouchered or paid.

To illustrate a precise apportionment of the cost of utility service assume that the M Co. buys gas from the Pacific Gas Co. and that the bills, received bimonthly on about the fifteenth, cover a bimonthly meter reading made on the tenth. The M Co. prepares monthly reports of income and financial condition. At the end of the first calendar month during which gas is used the M Co. estimates the cost of the estimated amount consumed—on the basis of its own meter reading and knowledge of rates—at $20. Entries are therefore made as follows:

Gas Cost	$20	
Gas Liability Accrued		$20

If desired the credit might be made directly to Pacific Gas Co., although the amount is estimated and no bill has been rendered by the utility. On the tenth of the second month the gas company reads the meter and on the fifteenth a bill for gas for one month and ten days is received, the amount being $28. The appropriate entries are:

Gas Liability Accrued	$20	
Gas Cost	8	
Vouchers Payable (or, first, Pacific Gas Co.)		$28

At the end of the second month the estimated cost of the estimated amount consumed since the tenth is $13. The entries therefore are:

Gas Cost	$13	
Gas Liability Accrued		$13

For the third month the cost is estimated at $23, and the entries are:

Gas Cost	$23	
Gas Liability Accrued		$23

On the tenth of the fourth month the meter is again read by the utility and when the bill is received the entries made follow the pattern shown above. And so on.

Transportation charges applicable to materials or merchandise purchased should be viewed as a part of the cost of such goods, as was emphasized in the preceding chapter; and the liabilities incurred on this account should be dealt with as are other invoices payable. It may of course not be feasible to assign all of the minor costs of express, freight, etc. specifically to materials or merchandise accounts. The cost of postage is commonly incurred on a cash basis, and is preferably handled through the imprest system. In large concerns the number of expenditures required for postal service is often reduced by the use of a special mailing permit. Stamps on hand at the end of the period represent a form of prepaid service and their cost should be included in assets.

Taxes and Donations. Property taxes, franchise taxes, sales taxes, payroll taxes, excise duties, special licenses and fees, and other types of levies by governmental agencies are treated by most concerns as business costs, applicable either to particular departments and activities or to the enterprise as a whole, depending upon the type of tax and other circumstances. Income taxes are usually treated as charges to revenue in the year accrued, and are not considered to be subject to departmentalization. Special assessments representing costs of public improvements such as pavements and sewers are commonly handled as additions to the cost of real estate assessed. As pointed out earlier, taxes are coerced payments and do not as a rule represent technical factors, such as materials and labor, required in production.

It is important that the effect of tax charges, like other costs, be registered in a reasonable way in the accounts. If property taxes are payable twice a year, for example, and it is desired to prepare monthly statements, it is necessary to accrue the tax liability so as to charge each month with an appropriate amount. Where the assessment has already been made, although the tax is not yet due, the amount to be

accrued period by period can be precisely ascertained; where the amount of the liability is indeterminate it is necessary to estimate the tax to be accrued. Under some circumstances taxes are construed as paid in advance, and the amount prepaid is treated as an asset, to be written off over the period to which the levy applies. Licenses are usually prepaid.

Gifts to community funds and other charitable and public undertakings sometimes are of a sufficiently recurring character to be viewed as a form of general expense. To accrue such costs prior to payment, however, is hardly expedient, except in those cases where the concern has made a definite commitment in the form of a subscription or otherwise.

Accruing and Paying Income Taxes. Income and profits taxes are levied on a calendar (or fiscal) year basis. In the Federal tax structure, moreover, a number of rates and many technicalities are involved. It follows that monthly or other interim accruals of such taxes are highly contingent. The best that can be done is to set up a liberal estimate of the amount of the liability in the light of the earnings of the particular period and the estimated results of operation for the entire year. The amount on which the income tax is levied is in general determined by deducting from total revenues all expenses, losses, and interest charges.

Partnerships and sole-proprietorships, it should be remembered, are not subject to income and profits taxes as enterprises. Instead the owners are subject to tax in their individual capacities.

To illustrate the general procedure required in accruing income taxes assume that the M Co., in the first month of operation, has earnings of such a level that—in view of the total estimated earnings for the year—the amount of estimated Federal income tax applicable to the month is $200. The appropriate entries are:

Income Taxes	$200	
Liability for Federal Taxes		$200

Later monthly reckonings are similarly handled. As estimates of earnings for the year are revised it is of course necessary to make adjustments. Where formal interim accounting for net income is not considered necessary the best procedure is to postpone accrual of income taxes to the end of the taxable year.

Federal income taxes on corporate earnings are payable in four quarterly installments in the year following the year of accrual.

Assume for example, that at the end of a year of operation the income tax of the M Co. is accrued in the amount of $2,500. On or before March 15 of the following year the tax return must be prepared and filed at the appropriate office of the collector of internal revenue, and a payment of 25% of the tax as calculated must be made when the return is filed. For the case in hand the entries are:

(1)

Liability for Federal Taxes	$625	
Vouchers Payable (or, first, U. S. Treasury Department) .		$625
To recognize definite liability for first installment		

(2)

Vouchers Payable	625	
Bank		625
To record issue of check for first installment		

If desired the entire amount of the accrued liability may be transferred to the definite liability account as soon as the amount of the tax becomes fairly certain or on the occasion of drawing the first check. Similar entries are required when the remaining quarterly installments are paid.

The filing of the return does not settle finally the amount of the tax. The total liability to the government remains somewhat uncertain until the return is audited, and even after the return has been audited and passed it is still possible for an additional assessment (or, conceivably, a refund) to be made under some circumstances.

Classifying and Summarizing Costs. The above discussion has dealt primarily with the initial accounting for costs, in terms of the kinds of cost factors required in operation. It must be borne in mind that costs as incurred must be traced in terms of particular plants, departments, stages of production, and other types of cost units, and this requires classification and reclassification of costs under various heads. Further, as has been emphasized at various points, it is necessary to distinguish sharply between costs incurred in their original form, costs converted and accumulated in production and summarized as work in process and finished goods, and costs assignable to the revenues of the particular period, if sound conclusions as to periodic income and financial position are to be drawn. Such distinctions, of course, are more important in the extractive and manufacturing fields than elsewhere, but they should nevertheless be recognized in all lines.

The tracing of costs within the enterprise, with appropriate classification and summation, is an essential feature of the work of the cost accountant.

Control and Audit of Costs and Payables. The general device of internal check should be applied wherever possible in the development of procedures for handling materials, labor, and other costs, and the liabilities arising in connection therewith. If adequate attention is given to this matter the charges to cost accounts should correspond to the actual costs incurred and there should be no recognition of unauthorized liabilities. Under almost any scheme, of course, some mistakes are likely to be made, and conditions sometimes arise which lead to delays, and the need for revision and adjustment of records.

Systematic estimating and planning with respect to periodic requirements is an important feature of the control of costs incurred. In some concerns such estimating takes the form of a number of interrelated budgets covering construction, materials, labor, and other types of costs. The scheduling of costs also involves careful planning with respect to the handling of current liabilities. In this connection mention may again be made of the need for procedures which insure prompt recognition of liabilities and provision for payment within discount periods.

The auditing of costs and payables should be in large part accomplished through the regular procedures for checking and recording. In addition many concerns employ internal auditors, whose duties include making regular verifications and tests, and public auditors, who make a more or less intensive examination of the records and procedures from time to time. Among the matters which should receive special attention in the periodic audit of liabilities are: (1) invoices or bills in process of being audited and recorded; (2) discounts and other offsets to outstanding payables; (3) possible liabilities arising through guaranties of product, additional tax assessments, etc.; (4) accrued interest, wages, etc.; (5) consignment accounts. In endeavoring to verify purchases and accounts payable, labor costs and payrolls, and other types of costs and corresponding liabilities, particularly where there is serious reason to question the integrity of the records, the auditor may find it necessary to obtain independent statements from the other parties to the transactions in question.

The technique of the auditor, which must be varied to suit the particular circumstances, need not be considered here.

Questions

1. List the principal features of the "voucher system" of handling costs and payables. Outline the general procedure under this system.
2. Describe the voucher register and its use. Where cost accounts are very numerous how is posting to such accounts accomplished?
3. Discuss the treatment of discounts and allowances under the voucher system. Installment payments. Notes payable.
4. How should consignments be handled on the books of the agent receiving such consignments for sale on consignor's account?
5. Compare material cost and labor cost: (a) with respect to underlying effect upon income and financial position; (b) manner in which incurred.
6. Outline a typical system for the accumulation of labor costs and the corresponding liabilities. Under what circumstances would clock cards be the only underlying record required?
7. Outline a procedure for meeting payrolls: (a) by issuing checks; (b) by payments in currency.
8. In the position statement how would you treat unclaimed wages? Advances to employees?
9. Outline a procedure to deal with the joint contributions of employer and employee required under "social security" legislation.
10. Illustrate the accounting for estimated legal costs. For contingent commissions and salaries.
11. Illustrate the computation of a service cost the amount of which is contingent upon the amount of net earnings.
12. Illustrate the accounting for rent prepaid and payable. Insurance prepaid. What is the nature of the insurance register?
13. Illustrate a precise accounting for telephone costs.
14. Discuss the accounting treatment of taxes. Donations.
15. What special problems are involved in accruing income and profits taxes for short-term periods? When is the amount of the obligation finally settled?
16. Assuming that costs have been properly recorded as incurred what further steps are required if the effects of such costs on business operation and financial status are to be registered properly?
17. Discuss the control and verification of costs and current payables.

XVI

REVENUES AND RECEIVABLES

Importance of Revenue Transactions. One of the outstanding facts with respect to any enterprise is the amount of periodic revenue, and transactions which involve the recognition of revenue are accordingly of basic importance in the accounting for business operations. Further, such transactions commonly comprise a large part of the total flow of activity which must be recorded and reported, and hence represent a major element from the standpoint of bookkeeping procedure.

Revenue transactions are the essential complement of cost transactions, internal operation or production lying between. That is, business activity is bounded on one side by the transactions necessary to the acquisition of the requisite goods and services from the various parties furnishing the same, and on the other side by the transactions necessary to the transfer of the final product of the enterprise to the customers or patrons. Revenue transactions are the primary source of funds to support recurring costs, and without adequate support at this point the business obviously cannot long continue. Further, the amount by which the flow of revenue exceeds the accompanying stream of costs (including losses and taxes) represents the earning power of the capital committed to the enterprise, a matter of vital significance to those who furnish such capital.

Looked at from the point of view of the vendor rather than the buyer, much of the discussion of costs and payables in the preceding two chapters can be readily applied to the treatment of revenues and receivables. From the standpoint of the particular enterprise, however, the distinction between the two groups of transactions is fundamental, and this makes it necessary to give them independent consideration.

Revenue Recognition. What is the proper evidence of revenue realization? And what is the appropriate occasion for the recognition of revenue in the accounts? These questions must be considered in the establishment of any system of procedure designed to deal with revenue transactions, and should receive brief attention here.

Credits to revenue account should be recognized only when it is possible to support such credits by equivalent asset values. It should be equally clear that revenue procedures should be established in terms of definite activities and events in the operation of the enterprise. The question then becomes, at what significant and convenient point in the process of dealing with customers are revenues adequately validated? Referring particularly to enterprises whose product consists of some tangible commodity, it appears that the principal specific events involved in the transactions with customers are: (1) securing the order; (2) delivering the product; (3) collecting the sale price. (Any two or all three of these steps, of course, may occur together.) The first of these events evidently does not satisfy the essential requirements. Taking the order is an important step, but recognizing revenue at this point would be an extreme case of "counting your chickens before they are hatched." In many instances the process of technical production is not completed—in fact it is sometimes not even started—when the order is received. At this point the contract is wholly unperformed, and the claims against the customer are substantially an offset to his rights against the enterprise. The second event is much more appropriate as an occasion for revenue recognition. The delivery of the product, in the first place, indicates completion of the work of production. Second, it involves a physical separation of values from the producing enterprise. In the third place, and what is perhaps more important, legal sale is usually considered to be effected upon delivery, and it is the fact of sale, in general, which warrants the booking of accounts receivable. In many enterprises, accordingly, delivery of product construed as legal sale has become the dominant occasion for the recognition of revenue. The third event, receipt of cash, is evidently of marked importance from a financial standpoint and in special circumstances it may be desirable to postpone the booking of revenue until this point is reached. Examples of such circumstances are long collection periods, marked uncertainty of collection, and the necessity for incurring substantial cost following delivery.

Where services rather than tangible commodities are the product

of the enterprise the situation is only superficially different. Services are not furnished in precise shipments or lots as are goods, and it follows that recognition of revenue in terms of actual deliveries to patrons may be somewhat difficult of accomplishment. Nevertheless the rendering of the service remains the basic justification for the booking of revenue and accounts receivable, and a suitable procedure, essentially in conformity with this principle, can ordinarily be developed. In the service field, it may be added, recognition of revenue primarily in terms of cash receipts is not uncommon.

Postponing recognition of revenue until sale of product or later, it is clear, means that any revenues implicitly involved in work in progress or finished goods on hand and unsold are not taken into account. A possible line of objection to conventional procedures appears in this connection. No doubt there is some basis for the view that the earnings of the typical enterprise accrue in terms of the entire process of economic production instead of emerging, in total, upon the specific occasion of sale and delivery. Where the time required to prepare and market a unit of product is short and there is a continuous flow of output to customers the point is evidently of little importance. Where, on the other hand, the period of cost accumulation is relatively long and units of product are completed and delivered very irregularly—as is often the case in shipbuilding and other construction lines—strict adherence to the sale basis of revenue accounting may lead to rather unreasonable periodic income reports. It has long been recognized by accountants, accordingly, that modifications of the usual assumptions with respect to revenue may be warranted in special circumstances.

Gain or Loss in Property Transactions. Income or loss may arise in connection with the sale of securities, real estate, or other assets lying outside the scope of the typical revenue transaction. According to the usual view, the gain or loss in such cases is measured by the difference between the cost (or other book value) of the property disposed of and the selling price or proceeds, and is chargeable with all applicable selling and other costs incurred. This is entirely appropriate for transactions of an incidental or non-operating character. On the other hand, for concerns actively engaged in buying and selling stocks, bonds, land, etc. on their own account there is something to be said for a definition of revenue in terms of total sales, as in the case of enterprises trading in commodities. The total stream of rev-

enue of a livestock dealer, for example, is measured by the amount of sales; similarly the gross revenue of a dealer in bonds can reasonably be gauged by the volume of business done.

Where there is an exchange of property, the true gain or loss is measured by the difference between the cost (or other book value) of the asset parted with and the amount which it would cost, if payment were made in actual cash, to acquire the property received in exchange. This is equivalent to saying that the amount of the proceeds of an exchange is determined by the fair market value, on a strict cash basis, of the property acquired.

The terms "capital gain" and "capital loss" are often applied to the income or loss resulting from transactions in assets other than those representing the regular product of the enterprise, particularly where the property disposed of has been held for a considerable period.

Definition of Sale—Special Cases. The strict legal test of purchase and sale is the passing of title. As explained earlier, the determination of the precise conditions under which title passes may be a highly technical matter, and in developing satisfactory accounting procedures care must be taken not to lay undue stress on legal niceties. In the great majority of cases, and barring the use of some special form of contract, the sale may be said to have occurred either when the goods are delivered to the customer or are consigned to the customer through the agency of a common carrier. It is at this point as a rule that the invoice is written, and a basis established for the charge to the customer and the credit to revenue account.

Where output is in the form of services there is, strictly speaking, no question of title passing in accounting for revenue. As explained above, however, the actual furnishing of the service represents a condition substantially on a footing with the delivery of goods, and in general this fact has adequate legal recognition.

A sale may be effected without actual transfer of goods to the buyer. If under a sales contract particular units of product have been segregated or earmarked for the buyer, and await his further instructions, the fact that they remain in the possession of the vendor does not preclude recognition of revenue and receivables. Payment in whole or in part is sometimes made by the buyer under such circumstances; and the vendor may be justified in treating such payments as collections on account rather than as advances.

A sale ordinarily assumes the transfer of goods to the buyer at an agreed upon price and for his unrestricted use. Accordingly it is necessary to distinguish consignments, and other forms of bailment, from sales. In general a bailment represents delivery for some specific purpose, without passage of title. Thus where goods are delivered for transport, for repair, for assay or other examination, for storage, or for use under a lease, they remain the property of the bailor and there is no sale to be accounted for. Delivery to an agent or factor likewise does not constitute sale, although occasionally consignments and conditional sales are booked, as a matter of convenience, in substantially the same manner as outright sales. Hypothecation or pledging is another case where physical possession is granted without sale.

Transfers between plants and departments, the entire situation being under one legal ownership, do not constitute sales. In this connection there is often some lack of harmony between the point of view of internal management and that dictated by consideration of legal entities involved. To the plant manager deliveries to another division or department within the enterprise may appear to be on substantially the same footing, in measuring the output or performance of his plant, as actual sales to outside organizations, and he may feel that such deliveries should be included, at commercial selling value, in the total revenues of the plant in question. For the purpose of this discussion it is sufficient to bear in mind the fact that the concept of revenue as employed in accounting primarily attaches to ownership of capital as exemplified in the particular legal enterprise, and where it is necessary to judge the performance of divisions of activity which do not lead directly to revenue other bases of measurement (for example, physical output and cost data) must be employed.

Cash and C. O. D. Sales. In many retail lines a large volume of sale transactions is on a cash basis, which means that collection from customers is accomplished upon the occasion of making sale and effecting delivery. The primary problem of procedure involved here is that of handling and controlling cash, a matter considered in an earlier chapter. Where cash registers are used the register readings furnish the basis for the credits to revenue accounts as well as the charges to cash; under the invoice system of cash sales the sales invoice—or a recapitulation of invoices—is the underlying source of the data for the accounts. In some establishments cash sales are entered

through the receipts journal; in other enterprises one or more distinct sales journals are employed. Highly specialized sales records are employed in many businesses, particularly where considerable classification of sales is required.

C.O.D. (collect on delivery) sales are closely allied to cash sales and are sometimes accounted for as such. Under this plan merchandise in process of delivery is deemed to remain a part of the stock of the vendor until collection is accomplished, and credits to sales account are based upon cash receipts. The usual legal view of C.O.D. sales considers title to have passed upon delivery to the common carrier, but denies the right of possession to the buyer until payment is made. Some enterprises adopt this view in their procedure, crediting sales and charging receivables upon consignment substantially as in the case of the regular account sale. As in many other connections, the controlling factor in determining the general plan to be followed should be convenience and efficiency under all the circumstances rather than legal hair-splitting—admitting the importance of the basic legal considerations. Under either treatment a routine must be established which will insure proper control of all elements of the transaction. A method of procedure employed by some department stores involves preparation from the sales slips of a C.O.D. delivery sheet showing date, invoice number, buyer's name and address, amount to be collected, and any other data which may be needed. Such sheets, arranged by drivers' routes, afford a basis for control of collections (supported by slips detached from delivered packages) and goods not delivered, as turned in by drivers. A record of this type may serve as a supporting ledger for an account showing "accounts receivable, C.O.D.," obviating the use of formal customers' accounts, in the case of concerns which adopt the second general method—that of recognizing sales in terms of invoices drawn rather than collections.

Paid Orders. Another situation which is closely related to the cash sale arises where the customer is required to advance the amount of the sale price with the order, a condition which is common in the mail order field. Assuming that the order is to be filled promptly, from goods in stock, it is not unreasonable to credit the sales account with the amount of cash received, an adjustment being made later for unfilled orders, if any. If, on the other hand, any considerable time is likely to elapse before preparation of invoice and consign-

ment of goods to customer it is desirable to open a liability account entitled "customers' paid orders" to receive the original credit entries. Upon shipment of goods, under this plan, the customer liability account is charged and sales credited. The file of unfilled orders, in lieu of ledger accounts, may be used to support the controlling orders account. On the whole the treatment of the paid order, until filled, as a liability rather than a revenue item, is the better plan. Whichever plan of booking revenue is employed it is essential that a careful system of handling customers' remittances be followed, extending from the opening of the mail to the making of the daily bank deposit.

To illustrate the general entries involved in handling paid orders, assume that the M Co. on a particular day received through the mail customers' orders and accompanying checks amounting to $5,000. Entries in general-ledger accounts are required as follows:

Cash	$5,000	
Customers' Paid Orders		$5,000

As orders are filled and invoices covering shipments are prepared, the amount thereof must be credited to sales. Assuming that on a particular day the amount of paid orders filled by the M Co. is $4,000 the following entries must be recorded:

Customers' Paid Orders	$4,000	
Sales		$4,000

Advances and Deposits. In service fields, such as transportation, the customer or patron commonly pays in full at the time the enterprise begins to furnish the service which has been agreed upon. In such cases, assuming that the transaction will be completed promptly without interruption or other need for adjustment, receipt of cash may be treated as the proper basis of revenue, subject to a possible correction for services "in process" at the close of the period. If, on the other hand, the payment made covers a service or series of services to be rendered at a future date or dates, as in the case of season theatre tickets or round-trip railway tickets covering a considerable period, the treatment of the amount received as, at the outset, a liability to customers and, as the service is furnished, a credit to revenue, is the only sound procedure.

A similar situation is found in the sale of commodities on the

ticket plan, as in the milk business. Assume, for example, that the Golden Dairy Co. issues tickets during a particular period in the amount of $5,000, receiving cash in the same amount. The general entries required are:

Cash	$5,000	
Tickets Outstanding		$5,000

Assume, further, that during this same period the deliveries of merchandise on tickets, as supported by tickets collected and turned in by drivers, amount to $4,500, the following entries are required to summarize:

Tickets Outstanding	$4,500	
Sales		$4,500

The amount of tickets taken up in a particular period might of course exceed issue of tickets in the same period. It should be noted that no regular customers' ledger would be maintained in this case (although a record of issue of tickets to particular parties might be preserved). Instead the tickets are deemed to be transferable claims, redeemable on presentation by bearer.

Advances by customers in the form of partial payments on particular orders should be credited to a type of liability account rather than to revenue, except perhaps where the merchandise is "laid by" or otherwise segregated or ear-marked for the account of the customer, in which case the sale may be considered to be closed and the balance due treated as an account receivable. Advances or deposits against which orders may later be placed by the customer making the advance should be completely excluded from current sales. Deposits made by customers to insure responsibility and financial standing, as sometimes required by utility companies, and which are subject to return upon termination of the relationship, are clearly liabilities, having no connection with the revenue account, although the amount of forfeited deposits may later be viewed as a special form of income or adjustment of expenses.

Where transactions involving advances by customers on particular orders are numerous a regular routine for handling such sales should be developed. In the case of deposit sales in department stores, for example, the use of a special type of sales check, with detachable sections for each payment, has been found to be a useful feature in

securing control. Further, if regular accounts are opened with customers making advances the use of a special ledger, with a distinct controlling account, is advisable.

Interpretation of Advances. In certain Federal tax cases the fantastic theory has been adopted that advances by customers are realized revenues. The fact is that all such advances are clear-cut liabilities. When he deposits funds prior to the furnishing of goods or services the customer is in effect extending credit to the vendor and acquires an equity equal to the amount of the money advanced. Prior to performance as called for by the agreement the vendor stands in essentially a fiduciary relationship to the customer and the full amount received is subject to return if the goods or services are not furnished. Revenue arises as the vendor delivers the product; receipt of cash in itself does not establish the existence of revenue. Persistent use of misleading language is partly responsible for the prevailing confused thinking about advances. For example, advances represented by books of coupons or tickets are often referred to as "sales." Actually nothing is sold at this point; the customer deposits money and a formal receipt is issued in the form of a book of tickets.

Levying income taxes on customer advances is completely at odds with accounting and financial principles and applicable legal rules; nor is such action justified under the wording of the Internal Revenue Code. The inequity of such action can be made clear by a simple example. Assume that during the last day of the taxable year an automobile service concern receives $1,000 from customers and issues books of tickets to such customers calling for 1,000 grease jobs to be furnished during the next year. The Federal government now steps in and insists that the money received is income and assesses $400 in taxes. If this assessment holds the taxpayer now has only $600 left to purchase the materials and cover the other costs required in furnishing product to customers as agreed. And if for any reason the business was unable to continue, and provide the product called for by the outstanding tickets, there would be only $600 left of the customers' money to return to them; under this condition the government would have in effect seized $400 of a fiduciary fund which involved no trace of income to the taxpayer.

The accounting for advances should follow a standard pattern, whatever the details of the transaction. When the advance is re-

ceived cash should be debited and the customer's account credited (and the use of such labels as "coupons outstanding" or "unearned magazine subscriptions" should not be permitted to obscure the fact that a liability to customers is being recognized). When product is delivered to customers who have made advances the customer is charged and sales credited, as in the case of any ordinary sale on account. The only difference in the over-all situation in the case of advances followed by delivery as compared with sale on account followed by collection is the *order* of the entries.

Sales on Account. For many fields of business sales on account are the dominant type of revenue transaction. In manufacturing and wholesaling, in particular, the usual conditions of delivery make outright cash sales impracticable, and even where notes or other credit instruments are employed the first stage of the transaction is often treated as a sale on account. Cash sales are common in retailing, as has been explained, but credit sales, usually on account, loom very large in a majority of retail lines.

Credit sales give rise to a number of problems, none too well controlled by many business concerns. Enforcing collection within a reasonable time is often difficult, notwithstanding the use of cash discounts and other devices to induce prompt payment; customers often expect special privileges with respect to returns and allowances; costs of recording and billing are considerable; use of additional working capital, usually without explicit interest, is involved; bad debts—accounts finally uncollectible—are often a serious item. In view of these conditions efforts have been made from time to time to encourage the use of trade acceptances and other forms of commercial paper as substitutes for the open account, but thus far these efforts have not met with marked success. It seems likely that the use of the account receivable on a large scale will persist, although it is to be hoped that methods may be developed which will minimize the objectionable practices which have arisen in connection with this form of credit.

The sales invoice, supported by the customer's order and the shipping and delivery records, furnishes the basis for the credit to revenue and the charge to the customer. Where the number of credit sales is not great the invoices may be recorded individually in a sales journal, and posting to customers' accounts may be accomplished through this medium; with a large volume of such transactions, a

summary of invoices for the day, week, or other period is the proper basis for the journal entries, postings to customers' accounts being made from the invoices themselves.

Handling Orders and Shipments. In many retail lines sales on account are made without the use of any formal order system. Customers present oral orders in person or by telephone, or use the ordinary letter or other non-technical form of written communication. In some retail fields, on the other hand, and quite generally in wholesaling and manufacturing, the customer submits a signed order for the desired goods on a standard form and such order represents the basis on which the vendor proceeds.

Following approval by the credit department (a matter of especial importance in the case of a new customer), a shipping order is prepared from the customer's order. These are serially numbered and are made in duplicate, triplicate, or in larger number as required. The original usually serves as the authorization to the shipping department; one copy, with the customer's order, is placed in the unfilled order file; one copy, under some routines, is forwarded to the customer as an acknowledgment; another copy may be used as a basis for "costing" the shipment, and in preparing the necessary periodic entries in the controlling accounts covering cost of sales and merchandise or finished goods. When the order has been filled the original of the shipping order, or a designated copy, goes to the accounting department and furnishes a basis for preparing the invoice and billing the customer. A copy of the invoice, as has been pointed out, is the medium which provides the entries in the customer's account and in the sales journal, from which, in turn, are secured the periodic totals for the accounts receivable control and the sales accounts. As shipments are made the proper papers are transferred from the unfilled to the filled order file. Orders which are filled by a series of shipments, and orders which are altered or canceled prior to filling or after being partially filled, require special treatment. Systematic handling of the files is an important feature of the control of customers' orders in process. Order files should be so arranged as to facilitate use by number, customer's name, type of product ordered, and other significant features.

Where the goods ordered are to be manufactured, instead of being taken from stock, a production or factory order or requisition is first issued, and if desired this form may be substituted for the shipping

order throughout the procedure. The order should be approved by the credit department before release to the manufacturing department. The file of unfilled factory orders, evidently, furnishes essential data in preparing the production schedule of the plant. When the articles ordered have been completed they are transferred to the shipping department for consignment to customer. The procedures of billing the customer, and accounting for receivables and sales, are substantially the same for production orders as for orders filled from stockroom or warehouse.

In handling orders and shipments, and in billing customers, highly specialized forms are employed by particular companies, especially among the larger enterprises. In some cases, for example, shipping order and invoice are combined and are typed simultaneously; another example is found in the use of a special copy of the shipping order as the bill of lading. As in recording other phases of business activity, the forms and procedures adopted vary with the conditions and the needs of the management.

Controlling Retail Charge Sales. In fields where formal written orders are not regularly employed, as in department stores and numerous other retail lines, sales and deliveries of merchandise on account require special means of control, particularly with reference to authorization by the credit department. As a rule the customer desires to have the goods delivered either on the day they are ordered or on the following day, and under these circumstances prompt action by the credit office is required. One problem that arises, where orders are presented in person and the store has hundreds or perhaps even thousands of credit customers, is the recognition of the customer; and in this connection some companies provide their regular customers with metal name plates or other special means of identification. In many establishments charge sales up to a specified amount can be approved by particular sales people and section managers. Regular customers, further, may be permitted a certain "line of credit." To facilitate prompt communication with the central credit office, special technical devices such as tubes and electric authorizing systems are employed by some of the large stores. In general it is not considered good procedure to permit delivery of goods prior to credit approval.

Customers' Accounts—General Procedure. As pointed out earlier, the maintenance of a systematic account (or some form of record)

with each credit customer is an essential feature of any bookkeeping system, whatever may be the details of the forms and routines established. To such account is charged, in general, the amount of each invoice, and to it is credited the amount of each payment made by the customer. Where customers' accounts are numerous, further, the desirability of using a controlling or summarizing account in the general ledger is universally acknowledged. The charges to the controlling account are usually posted in daily or other periodic totals from columnar sales records, and the credits are similarly secured from the receipts journal; the entries in the particular customer's account, on the other hand, are often obtained from invoices and underlying remittance records. In enterprises where the number of sales to the individual credit customer is large, as in some retail lines, the amount of work involved in posting each charge to the customers' ledger is considerable and it may be desirable to abridge this work by posting periodic aggregates taken from invoices or other records of specific sales which have been grouped by customers' names. (Small stores often use files of sales slips in lieu of formal customers' accounts.) Where monthly bills are issued regularly it may be expedient to prepare such bill or statement of account directly from the invoices or sales reports (including any unpaid balance as shown by the ledger), the bill or statement then being used as the source of the charges to the particular customer's sheet. Under machine methods the statement to the customer and the sheet for the ledger are often prepared simultaneously, a procedure which insures a complete harmony of bills and accounts.

For many concerns the standard ledger sheet of two main vertical sections remains a highly satisfactory form for the individual customer's account. Often a column for balances is added, as in the example on page 171. The forms, of course, must be varied to suit the conditions and needs of the particular business. Occasionally a form in which the account unit is the extended horizontal line (the "progressive" ledger, as it is sometimes called) can be employed to advantage. In general bound volumes are less satisfactory than loose-leaf or card systems, in binders or files, as such systems facilitate classification and handling. Where charge accounts are numerous the visible card file may be a convenience. The use of bookkeeping machines, which are rapidly supplanting pen-and-ink methods of handling customers' accounts in the larger concerns, noticeably influences the form of ledger sheet employed.

Careful classification or subdivision of customers' accounts for bookkeeping purposes is needed where such accounts are numerous. Among the common bases of classification are location or territory, terms or methods of settlement, trade groups, salesmen or selling departments, collectibility, and activity. Within each main group the sheets are usually arranged alphabetically by names of customers.

The customers' ledger must be compared and reconciled periodically with the corresponding controlling account in the general ledger. In this connection, as pointed out in Chapter IX, credit balances in particular customers' accounts should be separately listed and should not be deducted, for statement purposes, from the total of accounts with debit balances. Where deposits and advances by customers are numerous it may be advisable to establish a special file of such accounts, controlled by "customers' advances and deposits" in the general ledger.

Machine Methods of Posting and Billing. Use of bookkeeping machines and related procedures in posting and billing operations has become so widespread as to deserve further attention at this point. Such machines, in general, perform two functions: (1) recording the necessary amounts and other data; (2) performing the arithmetical calculations and proving the accuracy of the same. The bank statement of the depositor's account (an account payable from the standpoint of the bank) is a familiar example of machine recording. As applied to customers' accounts operation of the typical machine consists essentially of "picking up" the old balance, if any, adding the charges, subtracting the credits, and recording the new balance. Concurrently with the writing of the permanent records the arithmetical accuracy of the work is demonstrated by means of the tally roll or other form of written proof. Many of the forms used include a proof column in which are rewritten the previous balances, the total of which should agree with the total of old balances as first picked up. Under some procedures provision is made for the isolation of past-due balances and separate compilation of returns and other special classes of data. There is of course marked variation in mechanical and other features among the numerous installations found in business offices.

Machine methods require careful preparation of the work and systematic and specialized procedure throughout the operation. The

invoices, receipt slips, credit memoranda, or other media to be recorded must be sorted by names of individual accounts and arranged in proper order for posting, usually alphabetically. In some procedures a total is taken of each class of material to be posted, as an additional check in proving the accuracy of the work. If feasible the accounts in a ledger or file to be affected by a particular run of posting should be indicated in advance by the use of "markers," by "offsetting" (arranging account sheets so that those to be used project beyond the regular line), or by "stuffing" the ledger (placing the media to be posted in the binder or file in a projecting position in front of the accounts affected). Dividing the ledger accounts into sections or "blocks" handled by particular operators is helpful in laying out the work, and facilitates general control and correction of errors. The various forms and sheets employed must of course be conveniently available to those operating the recording mechanisms. As each run of work is completed the proofs must be examined and if no errors are disclosed the work may be approved and passed. A control sheet, showing the details of each day's proof as recorded by the machines, is a desirable feature. In large organizations responsible supervisors are in charge of the entire procedure.

Reference was made earlier to the procedure under which customer's statement and ledger sheet (if a distinct sheet is employed for this purpose), together with any necessary copies and proof sheet, are written simultaneously. This is sometimes referred to as the "unit" or "detail" system and is widely employed. This plan tends to keep the work of posting up-to-date, and insures precise correspondence of ledger accounts and statements forwarded to customers. The principal alternative system, in use in some stores and other enterprises, is the so-called "dual" plan. Under this procedure billing and posting are distinct operations; the billers prepare the statements on billing machines and the posters post the ledger sheets on the posting machines. In employing the dual plan it is desirable to arrange the media to be recorded into definite units of work which are handled successively by billers and posters. If this is done the tally roll of the billing machine covering a particular batch of vouchers—and showing totals of old balances picked up, items billed, and new balances, respectively—can be compared with the tally roll from the posting machine covering the same media. If the two rolls agree, the general accuracy of the recording is demon-

strated and the work may be passed as completed; if discrepancies appear, the person doing the checking locates the errors (usually readily accomplished by comparison of the tally strips) and has them corrected before approving the unit of work involved.

Mention has also been made of the procedure which involves writing the shipping order and invoice simultaneously. This system saves the labor of separate writing and checking of invoices and insures agreement of invoice and order. However, if there are many shipments on one order, or if the precise terms are not available when the order is prepared, it may not be practicable to adopt this plan. In some cases order and bill are written together, the bill being priced and extended at a later date.

Approval and Trial Sales. The consignment or delivery of goods to the customer with the definite understanding that they may be returned or retained as the customer pleases is an approval sale. In this type of transaction recognition of revenue should not be predicated upon consignment or delivery but should await acceptance by the customer. The initial transaction is tentative; there is no assurance that a sale has actually been effected. Further, in the typical approval sale the merchandise involved, until accepted by the customer, remains the property of the vendor and should be included in his inventory.

Nevertheless it is desirable to establish a definite procedure for approval sales, and it may even be expedient to set up memorandum customers' accounts covering goods out on approval, particularly in view of the light such accounts may throw on the habits of particular customers. A simple example will serve to illustrate the general procedure. Assume that a publishing company ships a set of books to a customer on approval. According to the understanding the customer has the privilege of "free examination for ten days," at the end of which time he must either return the set in good condition or pay the regular selling price of $100. Upon consignment the following memorandum entries are in order:

Customer	$100	
Approval Sales		$100

These entries are self-balancing memorandum data, and would not be incorporated in the regular statements if such were prepared at this point (although they might be included in a supplementary re-

port). Assuming that the customer keeps the set and sends his check for the required amount the following entries are in order on the vendor's books:

(1)

Cash	$100	
Customer		$100

(2)

Approval Sales.	100	
Sales		100

Or, the arrangement of entries may be: (1) reversing original memo entries; (2) recording a cash sale. If the sale were on a credit basis—that is, if the buyer were allowed a period of, say, thirty days following acceptance in which to make payment—the entries upon consignment would be as given above. Then, upon acceptance, the memorandum sales account would be charged and sales credited, and receipt of the customer's remittance would be handled like any other collection on account. If the customer returns the goods the memorandum entries must be reversed. In this case the question also arises of the proper treatment of transportation charges, and shrinkage in value of merchandise, if any.

Where several articles are delivered to the customer with the understanding that one or all may be rejected and it is not at all probable that the entire lot will be retained, it is undesirable to set up any formal accounting entries until the customer has made a selection.

In handling approval sales on account delivered locally, as in the case of department stores, two types of sales checks or invoices are sometimes used. In the first place a memorandum check is prepared covering the goods delivered on approval, and showing the numbers of the special tags which have been attached to the goods. One copy of this invoice is furnished to the customer, one copy serves as a delivery record, another copy is the department's record, and one copy is retained in the office until the merchandise is accepted or returned. When acceptance is reported a regular sales invoice is prepared and the procedure from that point is the same as in the case of the ordinary charge sale. If the goods are rejected by the customer an itemized receipt of merchandise returned is prepared, one copy of which goes to the customer and another copy, when signed by the proper department officer as an acknowledgment that

the goods have been returned to stock, is the basis on which the accounting office closes out the corresponding memorandum invoice. The file of open memorandum charges thus shows at all times the amount of goods out on approval.

Where goods are shipped subject to trial, loss of value in connection with returns is often a serious matter, especially in cases where the customer actually consumes a part of the shipment or where the trial period is long and depreciation is a factor. Isolation of the losses and special expenses arising in these situations, as far as possible on a departmental basis, is desirable.

Accrued Receivables and Income. Book accounts occasionally bear interest and where this is the case the interest charges should be regularly accrued. The first step is to go through the ledger calculating and posting the interest account by account in accordance with the agreements in effect. A summary of these charges is then prepared and this forms the basis for the charge to the controlling account and the credit to interest revenue. A special account may be used to receive the charge, rather than the regular controlling account for the customers' ledger, and in that event such supplementary account must be used in any reconciliation.

Notes, bonds, mortgages, land contracts, annuities, and other forms of contractual securities and instruments usually carry interest, implicitly if not explicitly, and systematic recognition of this factor is required on the books of all parties involved. Interest may also accrue on bank savings accounts and special funds. From the standpoint of the creditors' accounts the proper treatment in general conforms to that just explained for interest on book accounts. That is, at regular intervals interest is accrued in terms of the conditions of the contract, and the amount is charged to an appropriate receivable account and credited to revenue. Collections of interest are then credited to the accrued receivable and charged to cash.

Rentals receivable are sometimes referred to as accrued receivables, and in view of the fact that rents commonly accrue by contract on a clear-cut time basis this usage is not inappropriate. At the same time rents accrued are very similar to ordinary customers' accounts. The owner of the leased building, for example, is in effect selling the use of the building, occupancy, and if the agreement permits the tenant to pay monthly, for example, the owner is extending credit to his customer, and thus is "selling" on account. In the case of

apartment houses and other enterprises having numerous tenants special ledgers, controlled by appropriate general-ledger accounts, should be maintained, and should be systematically charged, account by account, with accruing rents, the concurrent credit being to rent revenue. In many cases, it should be added, tenants are expected to pay regularly in advance.

Dividends on stocks owned are usually not considered to be receivable until the board of directors of the corporation whose stock is owned appropriates or "declares" the dividend by official action. (In rare cases the assurance of regular declaration and payment may be so complete as to justify accrual on a time basis, as in the case of interest.) To illustrate the general entries assume that the M Co. owns 100 shares of R Co. stock and that a dividend of $5 per share has been declared, payable at a specified date in the near future. Under these conditions the M Co. is justified in recognizing the accrued receivable and revenue on its books, and such recognition would be especially important if the regular accounting period of the holder terminated between date of declaration and payment. The appropriate entries are:

Dividends Receivable (a more specific title if desired) . . .	$500	
Dividend Revenue		$500

When the dividend check is received the entries required are:

Cash	$500	
Dividends Receivable		$500

Commissions, fees, royalties, etc. likewise accrue, and wherever such special receivables and earnings arise they should be systematically accounted for in terms of the agreements in effect. As in the case of other types of accruals, highly specialized types of records may be employed in recording and controlling such items of income.

Special Types of Receivables. The emphasis in this chapter has been upon receivables originating through credit sales, or through furnishing services on a time basis. At this point mention should be made of a number of special classes of receivables arising in business operation.

One common type of receivable is the advance or loan to affiliated companies. Such receivables may or may not be represented by notes and in some cases run for considerable periods. Accommoda-

tion loans to officers and other employees are a second example, and sometimes represent a rather dubious asset. Balances due from creditors, on account of purchase returns, allowances, or other adjustments, furnish another example. Prepayments to creditors on account of consignments received or as advances on purchases represent still another case. Employees' drawing accounts and advances on royalty contracts are a closely related type of receivable.

Regular prepayments on account of operating costs such as taxes, insurance, commissions, rent, etc. constitute a type of receivable, in the broad sense. As has been pointed out, however, such "receivables" are collectible in services rather than in cash and hence are usually viewed as outside the territory of accounts receivable, proper.

Deposits to insure good faith and responsibility, or to secure specific performance, and which are later returnable, represent a type of receivable on the books of the depositor. Such deposits are often required of contractors in making bids, of sales agents, of branch managers and other employees, and of parties acting in a fiduciary capacity (although the filing of a surety bond is more common here). Where the deposit is subject to forfeit under certain conditions the asset is somewhat contingent in character, but in general this would not justify its treatment as a loss or expense. If conditions are such that the deposit is likely to prove permanent, or not to be returned for a very long period, and in the meantime will draw no interest, there is some question as to its significance as an asset, even if the relationship in connection with which the deposit originated is being satisfactorily maintained. Even in this case, on the other hand, the deposit may be construed as a continuing asset provided it makes possible a condition of value to the depositor, obtainable in no other or more economical manner.

Some receivables are so highly contingent as to render definite recognition on the books of doubtful propriety. Examples are claims in litigation, rights under guaranties, conditional commissions and fees, prospective gifts, and claims for tax refunds which may or may not be approved. On the other hand, reasonable claims against merchandise creditors for allowances, claims against common carriers for damage to goods in transit, and claims against insurance companies for losses suffered which are covered by insurance contracts are examples of receivables which may be sufficiently definite

and legitimate to deserve recognition. Decision as to proper treatment of such accounts should depend upon the circumstances of each case.

Handling Pledged Accounts. While ordinary book accounts usually have no established market or liquidation value accounts are sometimes pledged or assigned as security for loans and advances. In such cases it is desirable to segregate all accounts affected and establish a special control account. Collections on such accounts, if made by the assignor, must also be segregated and the funds received remitted to the assignee. Where collections are in the hands of the assignee the entries on the books of the pledging company are based on reports of such collections.

The amount of all pledged accounts should be indicated in the borrower's statement either by the use of a separate heading or by means of a footnote or comment. Some accountants advise showing the balance due to the assignee as a contra to the outstanding amount of pledged accounts; the alternative—and generally preferable—procedure is to treat such balance as a liability under appropriate title.

Control and Analysis of Receivables. The first step in the control of receivables is the development of effective procedure in granting credit. In large concerns a credit manager is in charge of this work and the customer's order or application is approved or rejected on his authority; and even in small concerns systematic handling of credits, with final decision in the hands of some one responsible party, is usually desirable. Among the factors to be considered in extending credit are general reputation and standing of applicant, previous experience—if any—with applicant, character of applicant's business, rating by recognized credit bureaus and agencies, reports from banks, and financial position and earning power as shown by analysis of applicant's periodic statements. Where investigation shows the applicant to be a satisfactory risk the setting of a credit limit is advisable, as this permits orders to be filled within the maximum line of credit established without further attention from the credit department. A credit file, with all pertinent data, should be maintained for each customer, and such file should be kept up-to-date, to facilitate the necessary periodic scrutiny of the customer's credit standing.

Controlling collections is a second essential step in handling re-

ceivables. Collections should be pushed vigorously, particularly in the case of slow accounts, although care must be taken to avoid unnecessary annoyance of customer. Reasonable insistence on compliance with credit limits and terms of sale is desirable. Prompt billing and rebilling is to be recommended, and urgent follow-ups may be helpful in some cases. It is generally agreed that collection agencies and legal processes should be resorted to only in extreme cases. In developing proper collection procedure complete cooperation between the accounting department and the credit department must be effected. Under one plan copies of all invoices are forwarded to the credit department where they are filed by payment dates and are followed up promptly when comparison of invoices due and reports of collections discloses delinquencies.

Classification of accounts by age is a useful tool in isolating overdue accounts for further study and attention. A significant ratio is the percentage of bad debts (and its complement, percentage of collections). The turnover of accounts receivable may be calculated by finding the percentage of the total credit sales for the period to the average balance of book accounts. For example, if the credit sales for the month total $100,000 and the average daily balance is $125,000 the monthly turnover is evidently 80%. This calculation throws light on the question of the degree to which the normal term of credit is being observed. If, for example, invoices are regularly due in thirty days the monthly turnover rate should approximate one and a rate of less than one indicates that customers on the average are not living up to the stated terms. Closely related to turnover is the number of average day's credit sales in receivables outstanding at a certain time or in the average balance for the particular period. If, for example, the average daily amount of credit sales for one month is $2,000 and the average daily balance of receivables for the same period is $100,000, the number of days' sales represented in the average balance is 50.

The costs of extending credit by the open account method—recording, billing, etc.—are undoubtedly substantial in many lines and studies should be made from time to time for the purpose of measuring this cost. In addition consideration must be given to the fact that carrying receivables requires the use of a considerable amount of working capital, and an implicit cost in the form of the normal earning power of such capital. It may well be that selling prices on

a credit basis are sufficiently high to cover all these factors, but in any event the problem deserves careful attention, particularly in connection with contemplated changes in credit policies.

Sales Budgets. The revenue budget—the systematic estimate of sales (and other revenue) for the coming period—is the central element in the formulation of any general business budget, as all other activities must in large degree be gauged by the sales program and properly coordinated with this program. At the same time the sales budget cannot ignore the available facilities for production and the fact that many types of costs will vary with output although not always in proportion. In planning the amount and distribution of sales throughout the year, accordingly, the aim should be to minimize seasonal and other fluctuations and to utilize all of the resources of the organization in the most effective possible manner.

Forecasts of sales must be based primarily on the data of past experience, tinctured with the immediate hopes of the management, and carefully considered in the light of all available information as to the state and trend of the particular industry and business in general. In some of the more stable lines reliable estimates can be readily made for periods ranging from one month to a year or even more. In other fields estimates extending beyond the immediate future, and the scope of orders in hand, are little more than guesses.

The preparation of a significant sales budget is facilitated if the statistics of past sales are available classified by periods, departments, types of product, territories, selling methods, kinds of customers, etc. All data should be available in number of units or volume as well as dollars. When drawn up in final form the sales budget appears as a more or less detailed schedule of estimates, usually presented in terms of a comparison with the corresponding items as realized in the immediately preceding period.

Sales Analyses and Reports. Aside from budget preparation, classified sales information is essential in the day-to-day administration of the selling and producing departments and of the business as a whole. The general manager and chief executive, the sales manager, and the production or "works" manager—all are vitally interested in the ebb and flow of the volume of revenue and the composition of such volume in all significant aspects. Sales must be classified by departments, branches, and types of product as the first step in the assign-

ment of operating charges and the determination of operating results. Further distribution by territories, types of selling effort, salesmen, selling terms, and other criteria are evidently essential to the development of effective sales administration and marketing policy.

Sales classification in the ledger accounts is usually limited to distribution by principal departments and principal types of product, further division being accomplished by supplementary statistical analysis and reporting. In this connection mechanical calculating and sorting equipment has been found to be of great assistance. By using suitable cards and machines customers' orders, shipments, returns, etc. can be analyzed from almost any desired point of view.

The principal sales ratios are the percentage of total operating expenses (or of a particular operating charge or group of charges) to sales, and the complementary percentage, net operating income to sales. The relation of average inventory to sales (sometimes labeled the "stock-turn") is a somewhat less significant ratio used in developing standards of operation in some retail lines. Many other special calculations are of course made use of in particular circumstances. It may be desired, for example, to find the percentage of returns, discounts, or allowances to total or departmental sales figures, to ascertain comparative sales performance by departments or other line of division, to measure periodic fluctuations in volume of orders or shipments, and so on.

Periodic sales reports, in form suited to the needs of the particular concern, are essential to proper administration of sales and production. Reports are regularly required from managers of branches and other special selling agencies and by regular sales departments. Such reports usually show classified sales by physical volume and by dollars, in comparative form, and may include data with respect to collections, expenses, orders, etc. Reports of this type are often presented daily and weekly, as well as in terms of longer periods. Another class of sales reports are those submitted by individual salesmen, showing list of calls, orders taken, new accounts opened, and other routine information.

Data of orders and sales are often compiled in the main office over a considerable period in terms of particular salesmen, territories, customers, etc. and from such compilations special reports can be readily prepared as required by the management.

Verifying Receivables and Revenues. The first phase of the audit of receivables, as in the case of other types of accounts, is the development of procedures which will insure continuous integrity and accuracy in the day-to-day handling of transactions with customers. The established routine and system of internal check in effect should provide for regular checking of charges to accounts receivable against the data of orders and invoices, and other original evidences, with careful attention to terms, extensions, special deductions, and other details, and should include features designed to prevent unauthorized deliveries of goods and omission of entries in the case of shipments properly made. The system should also provide for full verification and control of collections, with special safeguards in the case of returns and claims for allowances and rebates. The important general aspects of any scheme of internal audit—a definite prescribed program, with responsibility focused at critical points—should be emphasized.

As pointed out in an earlier chapter, the handling of customers' accounts should include frequent comparison and reconciliation of subsidiary ledgers and controlling accounts.

The verification of sales by proper internal procedure and periodic audit is merely another phase of the general problem of effective handling of transactions with customers, and the principal points involved have already been covered. The audit of sales, of course, includes more territory than the audit of receivables, as sales result from cash as well as credit transactions. Sales verification, further, has a close relation in some lines to the mechanism of inventory valuation and control.

Returns and allowances and all other types of sales adjustments must be investigated. Sales of capital assets should be excluded from regular sales totals. Particularly in the case of the periodic examination the auditor should see to it that all transactions near the close of the period have been properly entered and that no sales of the following period are included.

In some situations the general validity of recorded sales figures may be tested by a comparison of the relation of merchandise cost of sales to sales, or of total operating expenses to sales, by departments and by periods. In fact there have been numerous cases in which the initial indication of irregularity and fraud has been discovered through the use of such calculations.

Revenues other than sales, such as interest, dividends, royalties, etc., must be audited primarily in terms of the underlying contracts, special reports and statements, and the records of cash.

Questions

1. Why are revenue transactions of particular importance to business management and to the accountant?

2. What are the two main requirements of revenue recognition? Discuss the three principal steps involved in typical transactions with customers in the light of these requirements. Compare the merchandising and service fields in this connection.

3. "There is some basis for the view that the earnings of the enterprise accrue in terms of the entire process of economic production instead of emerging, in total, upon the specific occasion of sale and delivery." Explain.

4. How should the amount of revenue—the "volume of business"—be measured in the case of a concern engaged in buying and selling municipal bonds, for example?

5. What is meant by "capital gains" and "capital losses"? How is the amount of such a gain or loss to be measured in the case of an exchange?

6. Define the sale. What is its legal basis? What physical act is usually identified with the sale?

7. Giving examples, contrast bailment and sale.

8. Distinguish between internal transfers and actual sales.

9. Discuss the problem of controlling and recording cash sales.

10. What is meant by C.O.D. sales? Outline a method of procedure for such sales.

11. Illustrate and explain the preferred treatment for paid orders. Do the same for other forms of advances and deposits by customers.

12. Indicate some of the special problems which arise in dealing with sales on account. What is the underlying document in connection with such sales?

13. Outline a typical procedure for handling written customers' orders and shipment on account.

14. Discuss the handling of customers' accounts from the standpoint of ledger forms and procedure. What are some of the bases for classifying customers' accounts?

15. Outline the principal features of machine methods of posting receivables and billing customers. What is meant by the "unit" and "dual" plans in this connection?

16. When should revenue be recognized in the case of approval or trial sales? Call attention to the special problems involved.

17. Give several illustrations of accrued receivables. In what sense is unexpired insurance a "receivable"? How should deposits to insure responsibility be accounted for?

18. Discuss the treatment of pledged accounts.

19. What are the two main phases of the control of customer credit? With an illustration show what is meant by "turnover" of accounts receivable.

20. What is the nature of a sales budget? Indicate its importance. State some

of the common lines of analysis of sales data in which the management may be interested.

21. Outline a system of internal check and periodic audit covering revenues and receivables for a department store. A chain of gasoline stations.

XVII

SALES DISCOUNTS AND ADJUSTMENTS

Interpretation of Sales Discounts. Discounts offered to customers should not be interpreted as either losses or expense charges. To hold that such items are losses denies the fact that they are freely offered with the expectation and hope that they will be accepted; to treat discounts as expenses assumes that additional charges are involved in the case of sales to customers making prompt payment as compared with sales represented by slow accounts, an obviously unreasonable position. The proper interpretation views regular discounts offered to induce prompt payment as offsets to nominal sales figures. The true, effective price is the net figure and if the gross price is recorded as a result of bill-writing and bookkeeping tradition the amount of discount concurrently or subsequently isolated must be treated as a deduction from gross sales.

The effect upon final income figures, it is true, is not changed by interpreting discounts as a contra to gross sales rather than as a loss or as a cost of revenue. Nevertheless the point is of importance in effecting proper departmental distributions and in presenting a general income statement with sound internal arrangement as well as a correct concluding figure. Discount rates may vary between departments or branches and the amount applicable to a particular division may be considerable. Under such circumstances the treatment of regular discounts to credit customers as a financial expense or loss applicable to the business as a whole will result in distorting comparative departmental data.

Assuming proper departmental distribution, sales discounts should either be excluded entirely from the general income statement—by beginning with the net sales figure—or should be set up as an offset to gross sales, thus:

Gross Sales	$1,000,000
Less Sales Discounts Applicable	30,000
Net Sales	$ 970,000

In some cases the selling terms are complex in that they involve more than one discount rate and more than one discount period. For example, on a particular sale or class of sales the customer may be allowed a discount rate of 3% of gross if payment is made within ten days of date of invoice, 2% if payment is made within fifteen days, 1% if payment is made in twenty days, the full amount of the invoice being due in thirty days from date thereof. In the offering of "chain" discounts—a series of discounts deductible successively from, first, gross list price and then from each succeeding net amount —is found another example of complex credit terms (usually restricted to trade discounts). In such situations the amount of the effective net price may in general be defined as the lowest of the several prices offered.

Sales Discounts—Principal Procedures. It is common procedure, especially in small enterprises, to charge the customer and credit sales with the gross amount of the invoice, with no isolation—at the time of sale—of the special factor of discount offered for prompt payment. When the bill is collected within the discount period the customer is credited with the gross amount and sales discount is charged with the difference between the cash collected and the gross amount of the bill. If the customer neglects the discount and later pays the gross amount the customer's account is credited and cash charged, the amount of lapsed discount being buried in these entries. As a rule no adjustment is made for outstanding discounts at the end of the period, although such adjustment is not precluded under this general procedure.

The use of net prices throughout represents the principal alternative procedure, and is a simple and satisfactory method of treatment. If the customer is charged and sales credited with the net amount of the invoice no special account or adjustment is required for all cases in which discounts are taken. Where the discount is neglected the amount of the discount must be recognized as a special revenue—a revenue which may be viewed as offsetting in part the additional costs incurred in handling slow accounts and the losses arising from failure to collect. This procedure has the advantage of isolating and

emphasizing the special cases of lapsed or neglected discounts rather than the routine situations where discounts are taken in due course.

Recording Discounts—Gross-Price Method. The credit sales of the M Co., during the first year of operation, total $100,000, gross, and $98,000, net. Collections from credit customers, on a net basis, total $78,400, net (gross amount of invoices, $80,000). Collections from customers who have allowed available discounts to lapse total $2,000, the discounts included amounting to $40. At the close of the period unpaid accounts on which discount privileges have expired amount to $2,500, the lapsed discounts thereon being $50. The unpaid accounts on which discounts are still available total $15,500, gross, and $15,190, net. In condensed form the entries covering this situation are:

(1)

Accounts Receivable	$100,000	
Sales—Gross		$100,000

(2)

Cash	80,400	
Sales—Discounts	1,600	
Accounts Receivable		82,000

An adjustment should be made at the end of the period to cover outstanding discounts which have not lapsed and which will presumably be taken. Assuming that of the $310 of such discounts outstanding the amount of $290 will be taken the following entries are appropriate:

Sales—Discounts	$290	
Accounts Receivable—Allowance for Outstanding Discounts		$290

The adjusted revenue for the period now stands at $98,110 (gross sales, $100,000, less sales discounts taken and accrued of $1,890).

The amount of the special allowance should be treated as a contra to the face of the unpaid accounts. In the next period, as the accounts with which these discounts are associated are collected, the discounts taken should be charged to the allowance account rather than to sales discounts. Discounts taken on accounts originating in the next period, on the other hand, should be charged to sales discounts as before. If the special allowance for outstanding discounts proves to be excessive any free balance therein after all old accounts

have been collected or have run beyond the discount dates becomes, technically, a credit adjustment of the income of the preceding period; similarly if the allowance proves to be too small the excess of discounts taken on accounts originating in the preceding period over the allowance provided constitutes a debit adjustment. (In general, as has been pointed out elsewhere, corrections of earlier income determinations should be reported in the income statement of the year of correction, appropriately described, rather than being handled as direct charges or credits to retained earnings.) It would be satisfactory, in most cases, to charge all discounts in the second period as taken to the allowance account until the balance therein were exhausted, the sales discount account being used to absorb all charges for discounts taken from this point on to the end of the period. As an alternative, the adjusting entries might be reversed at the beginning of the following period and all collections recorded in the regular manner.

Throughout this procedure, provision for isolating neglected discounts is lacking. It would of course be possible to segregate discounts collected by a charge to sales and a credit to a special account, and similar entries might also be made to cover the estimated amount of discounts offered during the period that will be collected after the end of the period. If the possibility of bad debts is ignored in the example the estimated amount of discount applicable to current sales that will be collected is \$70 (the uncollected discount already lapsed of \$50 plus the \$20 of discount still available that it is estimated will be allowed to lapse).

Recording Discounts—Net-Price Method. With net prices used the entries for the example given above are:

(1)		
Accounts Receivable	\$98,000	
Sales—Net		\$98,000
(2)		
Accounts Receivable	40	
Lapsed Sales Discounts		40
(3)		
Cash	80,400	
Accounts Receivable		80,400
(4)		
Accounts Receivable	50	
Lapsed Sales Discounts		50

In these entries it is assumed that all lapsed discounts are regularly charged to the accounts of the customers affected. The total amount of revenue recognized now stands at \$98,090, as compared with \$98,110 under the gross-price method outlined above. The difference of \$20 is the estimated amount of outstanding discounts that customers will allow to lapse. It would be possible to accrue this amount under the net-price approach by charging receivables and crediting the special revenue account. However, since the accounts of particular customers cannot be charged at this time it would be necessary to exclude the debit entry from the regular control account; Accounts Receivable—Estimated Discounts to be Lapsed would be an appropriate title.

Collection of accounts on which discounts have been allowed to lapse is often uncertain, and this means that an accrued revenue supported by forfeited discounts is not very dependable. However, this point can be taken care of by making adequate adjustment for bad debts.

Discounts on Prepayments. Special discounts are sometimes allowed to customers who make substantial payments in advance, either in the form of lower net prices or the delivery of a larger quantity of goods at regular prices. An example of the latter practice is found where coupon books, redeemable in merchandise at regular prices, are issued at a discount. The M Co., for example, offers its patrons coupons in blocks of \$20, face value, at \$19 per book. In a particular period one hundred such books are issued, the amount of cash received being \$1,900. During the same period coupons are presented by customers, aggregating \$1,500, face, and \$1,425, net, and merchandise is delivered thereon at regular prices. Assuming that it is desired to record both gross and net prices the following entries are suitable:

(1)

Cash	\$1,900	
Coupon Books Outstanding—Discount	100	
Coupon Books Outstanding—Face		\$2,000
To record issue of books		

(2)

Coupon Books Outstanding—Face	1,500	
Sales—Gross		1,500
To record deliveries at gross		

(3)

Sales—Discounts	75	
Coupon Books Outstanding—Discount		75
To recognize discounts applicable to current sales		

The balance of the coupon discount account is at all times an offset to the coupon liability account shown at face, the actual liability being the net amount.

The situation can be recorded throughout at net prices, as follows:

(1)

Cash	$1,900	
Coupon Books Outstanding—Net.		$1,900

(2)

Coupon Books Outstanding—Net	1,425	
Sales—Net		1,425

The first procedure, although somewhat more complex with respect to general-ledger entries, has the advantage of presenting figures which are directly comparable with the face amounts of coupons outstanding and collected which are compiled in the process of auditing. It also serves to isolate the discount element.

Sales Allowances. Special allowances and rebates to customers arise under a variety of conditions. Delay in filling order, inaccurate filling of order, improper packing and damage in transit, sharp price changes, and dissatisfaction of customer with the merchandise are examples of conditions which may give rise to claims on the part of the customer and the granting of an allowance by the vendor. In so far as allowances are made as a matter of general policy, and more or less without regard to the validity of the claims, they represent adjustments of the gross volume of revenue as originally recorded (although the charge may be lodged in the first instance in a special account), and are to be viewed as a rule as applicable to the business as a whole rather than as assignable to the activities of particular departments. On the other hand allowances resulting from blunders in manufacturing or handling, or other errors and mistakes on the part of the vendor's organization, are akin to losses in so far as they reflect a failure to recoup costs incurred which might have been recovered under more favorable circumstances. Allowances of this type, moreover, are often assignable in large part to particular departments and phases of operation.

To illustrate, assume that the M Co. makes a sale to the R Co.

amounting to $1,000. The entries on the vendor's books at the time of shipment are:

Accounts Receivable (also R Co.)	$1,000	
Sales		$1,000

Later the R Co. makes a claim of $100 for breakage in transit due to faulty packing. The claim is investigated and found to be valid and is allowed by the M Co. A credit memorandum for $100 is prepared and forwarded to the R Co., and the following entries (based on a copy of the memorandum) are made by the M Co.:

Sales Allowances (or some more specific departmentalized account)	$100	
Accounts Receivable (also R Co.)		$100

The question now arises, what is the nature of the sales allowance charge of $100 and how shall it be disposed of? Under the usual treatment the allowance is handled as a deduction from the gross revenues of the department involved. It thus cancels a portion of the revenue volume and, with costs unchanged, brings about a decrease in the net operating result. The only objection to this interpretation and procedure lies in the fact that the actual cost or loss implicitly involved is not isolated and the remaining revenues are perhaps too heavily charged. Assuming that the amount of $100 originally credited to sales was a normal revenue element in view of the costs incurred, and that total costs in the department in question are averaging ninety cents per dollar of sales volume before deduction of special allowances, it may be urged that operating costs to the amount of $90 should be segregated and treated as a special cost or loss, not chargeable to the net amount of sales after the deduction of the allowance. On the other hand, if sales allowances are not running in excess of a reasonable amount, in view of the volume of business and all the circumstances, the effective volume of revenue to which all costs incurred are assignable may be interpreted as original sales less allowances, and the adjustment of costs indicated may be considered unnecessary. In any event, careful observation of sales allowances, and periodic statistical analysis of effects, is desirable.

Allowances to Employees. Sales to officers and other employees are common in many enterprises, and in some cases the conditions associated with such transactions raise a question as to their effect upon

the vendor's accounts. Where these sales are on a regular commercial basis, with no special concessions attaching, they should be recorded as are sales to other parties. The granting of unusual discounts to employees, on the other hand, puts such transactions on a peculiar basis and makes necessary a special analysis of the situation to determine the nature of such allowances. As a rule allowances to employees are either deducted directly from gross sales, by selling departments, the net amount only being recorded, or are treated as a contra to nominal sales figures. In no case, it is usually held, should such allowances be included in operating expenses, in whole or in part, regardless of the treatment accorded ordinary cash discounts. Assuming that sales to employees involve smaller costs by way of advertising, handling, collection, etc. than do regular sales, and that the amount by which the special discount exceeds ordinary discount approximately matches the saving in costs, this treatment would seem to be justified. However, if there is no particular advantage from a cost standpoint in sales to employees the excess of the usual net prices over the net prices to employees may well be interpreted as additional compensation, properly chargeable to the departments to which the employees in question render service. This view receives support where the net prices to employees are distinctly lower than prices for similar articles available to them elsewhere.

For example, the M Co. in a particular period makes sales on account to employees amounting to $5,000 at regular prices. A special allowance of 10% of gross, in addition to any regular discount for prompt payment, is allowed. If these sales are recorded at gross prices and the amount of the special allowance is immediately isolated as an offset to sales, the required entries, in summary, are:

Accounts Receivable (and accounts of particular employees)	$4,500	
Employees' Sales Allowances (applicable to the various selling departments)	500	
Sales (by selling departments)		$5,000

The same effect is secured, of course, if the sales account is credited directly with gross prices less the amount of allowances and no allowance account is used.

The alternative treatment suggested, under which the allowance is handled as additional compensation to employees, requires entries as follows:

Accounts Receivable (and particular accounts)	$4,500	
Operating Cost Accounts (properly departmentalized) .	500	
Sales (departmentalized)		$5,000

Both treatments have the same effect on the net income of the business as a whole (ignoring the question of the assignment of costs to inventories), but will give different net departmental results to the extent that the wages of employees to whom sales are made are not distributed in accordance with the departmentalization of such sales.

The principal objection to the alternative method lies in the fact that the departments in which the employees work are loaded with a somewhat uncontrollable and unpredictable element of labor cost, particularly in view of the fact that employees will "collect" their indirect compensation in goods irregularly as between persons and periods of time. A compromise treatment, designed to meet this objection, would be to handle employees' discounts as a general personnel cost, assignable to departments (if spread in any fashion) on a basis which disregards the functions of the particular persons who make the purchases.

Mention may be made in this connection of those now rare cases where employees are paid in due-bills which are redeemable in merchandise or other goods or services furnished by the employing company at prices in excess of fair commercial rates. With such conditions, the revenues of certain departments are padded by the amount of the overcharge to employees (assuming they are based upon the face amount of due-bills redeemed), and the operating accounts of the employing departments, to the extent that they are based upon nominal wages and salaries, are similarly overstated.

Allowances on Trades. In enterprises selling office furniture and appliances, motor vehicles, and other types of equipment the allowances made for used units "traded in" by the buyer afford a means of making reductions in stated prices, and such allowances often represent, in part, an offset to nominal revenue figures. On the books of the vendor these price concessions are usually disguised by crediting sales with list price and treating the entire amount of the allowance as the cost of the secondhand equipment acquired. This handling is definitely objectionable. The proper procedure is to credit sales with the amount of cash received, or to be collected, plus the wholesale cash value of the used machine or other article re-

ceived, or, if it is considered expedient to credit sales with nominal contract values, to charge to a special allowance account the excess of the stated price over the actual proceeds determined as indicated.

For example, the Huron Co., a distributor of motor cars, sells a truck to the West Oil Co. at a stated price of $1,500. The buyer pays $500 in cash, gives a ninety-day, 5% note for $500, and turns in a used truck. The old truck has a wholesale net cash value of $400. The usual treatment can be indicated as follows:

(1)

Accounts Receivable (also West Oil Co.)	$1,500	
Truck Sales		$1,500
To record sale		

(2)

Cash	500	
Notes Receivable (also underlying record)	500	
Accounts Receivable (also West Oil Co.)		1,000
To record receipt of cash and note		

(3)

Used Trucks	500	
Accounts Receivable (also West Oil Co.)		500
To record delivery of old truck by buyer		

The proper treatment—assuming that as a matter of routine procedure it is advisable to recognize nominal sale price in the sales account—is as follows:

(1) (2)
(Same as above)

(3)

Used Trucks	$400	
Allowances on Truck Sales	100	
Accounts Receivable (also West Oil Co.)		$500

A minor variation would be to charge the West Oil Co. with only $1,400 at the outset, assuming that the old truck to be taken in has been appraised, and thus recognize the allowance in the initial entry. Another variation would be to credit sales with only $1,400, and thus eliminate the need for the special allowance account.

Allowances on Trades—Effect on Departmental Accounts. Isolating the effect of price cutting, in whatever form, is especially important from the standpoint of departmental accounting. If the Huron Co.—to refer to the above example—handles large numbers of used

cars the operations of this phase of the enterprise may well be segregated, at least with respect to sales and merchandise cost of sales. In this event the used-car department will almost surely show an actual loss, or a very meager profit, if nominal allowed prices are treated as costs (assuming that nominal prices regularly exceed cash value, which is not always the case). Used cars must be stored, repaired, and sold, and total retail sale value, after all necessary costs have been incurred, is often less than the allowance price. Under such conditions the manager of the used-car department may well complain of the method of accounting. Even the use of estimated net selling prices (estimated selling price less estimated costs to be incurred) as the effective cost of the secondhand equipment is objectionable, as this assumes that on sales of used cars the business should do no better than break even, that the capital invested in this phase of operations is not entitled to a return.

The procedure objected to here is sometimes defended on the basis of what may be called the "by-product" theory. This theory, applied to the affairs of the Huron Co., for example, assumes that the Company is engaged essentially in the business of marketing new motor vehicles and that disposing of the used cars turned in is merely an incident in the process of fulfilling the primary function of the enterprise. According to this view all costs incurred are costs of handling and selling new cars and the nominal losses on handling used cars are an addition to the costs of operation or, possibly, a discount on sales of new units. Or, to make a still more extreme application of the by-product conception to this case, all costs of handling and selling used cars might be interpreted as costs of handling and selling new units and the total revenues from used car sales might be recorded as an offset to total operating charges.

This line of argument is not convincing. The treatment of sales of by-products merely as adjustments of main-line costs and revenues has been developed primarily as a convenience to be applied where such items are comparatively unimportant and departmentalization is impossible or inexpedient. In general all revenues, whether primary or secondary, must be assumed to be subject to costs, and where actual segregation is not feasible any process of imputation should be harmonious throughout. In other words, it is not as a rule sound to assume that any element of revenue is cost free; and it is equally unsound, by arbitrary assumption and procedure, to deny the possibility of profit to any particular type of sales.

Sales Returns and Exchanges. A return of merchandise which has been charged to the customer and credited to sales constitutes in effect a cancellation in whole or in part of the original transaction (if occurring in the period of sale). A proper ledger treatment on the occasion of the issue of the credit memo to the customer, accordingly, consists of a reversal of the original entries in the appropriate amount. As a rule, however, a special sales returns account is charged when the customer is credited, such account being interpreted as a contra to gross sales and so handled in the preparation of periodic reports. In some cases a special journalizing medium is used in recording returns. If goods are returned on a cash sale, or following collection on a credit sale, the procedure is the same, but the credit to the customer's account will represent a credit balance (ignoring the possibility of such credits being offset by debits on other transactions) and will represent a form of liability. Such liability may be met either by a cash payment to the customer or by being absorbed as a down payment on a subsequent shipment.

Where other merchandise of the same selling value, and from the same department, is exchanged for goods returned it is of course possible to permit the original ledger entries to stand without change. Even in this event it is desirable that a regular procedure be followed with respect to underlying documents. That is, a credit memorandum should be issued covering the returned goods and a new invoice prepared for the merchandise delivered in exchange. In most situations, moreover, a complete ledger accounting for each phase of the transaction is to be recommended. This is especially important in that the merchandise issued in exchange often does not match the goods returned exactly with respect to either kind or price.

Routine procedures governing returns and exchanges should be carefully worked out. In large concerns the receiving clerk prepares a report of goods returned, preferably on a distinct form, one copy of which goes to the accounting office. A credit memorandum must be issued and approved, and checked against the report of goods received, before passing the credit to the customer's account.

Cost of Returns. The most important matter connected with returns is the amount of cost or loss thereby suffered, and many enterprises fail to give adequate attention to this question. The losses involved are of two types. In the first place the returned goods are likely to have suffered some damage or deterioration, and where this

is the case they can scarcely be taken into inventory on the original cost basis. In the second place all of the operating costs which are assignable to the original revenue now canceled by the return, including transportation, selling, and office charges, become losses, at least to the extent that they are not reasonably assignable to other revenue elements. It may be argued, it is true, that occasional returns represent a typical and inevitable feature of business operation and that therefore the costs involved need not be viewed as downright losses. But even if this position—which has considerable merit—be accepted, there is still justification for holding that isolation of these special costs is desirable, so that the phenomenon of returns may be brought under more careful observation.

Under a continuous inventory system, where credits to merchandise or finished stock accounts are regularly made as goods are shipped, with concurrent debits to appropriate cost-of-sales accounts, charges to stores must be made as returned merchandise comes in, and the amount of loss in value, if any, may be estimated and recognized at that time. Or, if more convenient, the returned goods may be charged back to stock at original values, the amount of any loss suffered being estimated on all returned goods periodically. If no continuous inventory plan is in operation, and no credits to merchandise have yet been made, no charge to merchandise is required to cover returns, although the problem of recognizing any loss suffered remains.

To segregate all operating costs, including selling and office charges, applicable to a particular batch of returned merchandise would evidently be a difficult matter in most enterprises. It is not out of the question, on the other hand, to estimate the total assignable cost on the basis of the general relation between total sales for the period, before the deduction of returns, and the total of all costs chargeable to the business of the period. And even if it is inexpedient in a particular case to attempt to segregate the costs applicable to returns by means of ledger entries there is still something to be said for a periodic statistical study of the problem.

To illustrate the way in which the cost of returns may be isolated in terms of accounting entries, assume that the M Co. makes a sale of $2,500 to the R Co., on account, and that the vendee in the same period returns goods amounting to $500, sale value. Assume, further, that as yet there has been no recognition in the M Co.'s accounts of the cost of goods assignable to this transaction. With these con-

ditions the appropriate entries on the M Co.'s books upon receipt of the returned goods, and acceptance of same, are:

Sales Returns	$500	
Accounts Receivable (also R Co.)		$500

Later it is estimated that the returned goods have suffered a shrinkage in value from an inventory standpoint, due to shipment and return, of $50, and that transportation and other operating costs, in addition to the cost of the goods, average 15% of sales on this class of business. These data afford a basis for the following entries:

(1)

Cost of Returns	$50	
Merchandise.		$50
To recognize shrinkage in inventory value		

(2)

Cost of Returns	75	
Selling Costs (and other operating accounts) . . .		75
To segregate estimated transportation, selling, and other charges applicable to returns		

Were a continuous inventory system employed by the M Co., and reflected regularly in the general-ledger accounts, and using otherwise the same data coupled with an assumption that the total book cost of the merchandise returned is $400, the following entries would be included in the foregoing:

Merchandise	$400	
Merchandise Cost of Sales		$400
To charge returns to stores and adjust cost of sales		

It is implied in this example that the M Co. is a trading concern. If the vendor were a manufacturing enterprise the account titles used in recording cost of returns would be appropriately modified.

Allowance for Outstanding Returns. Where returns bulk large consideration should be given at the end of each period to outstanding returns on sales to date, as otherwise both net sales and accounts receivable will be overstated in the financial reports. The precise amount cannot, of course, be determined, but an estimate can be made based on past and current experience. To illustrate, assume that the sales of the M Co. during the first period of operation total $100,000 and that returns received and accepted to the end of the

period amount to $4,400. Assume, further, that as a rule goods are returned within ten days of delivery, and that on the sales of the last ten days, totalling $20,000, returns have thus far been received amounting to only $400. With these conditions, returns of $4,000 ($4,400 less $400) on sales of $80,000 ($100,000 less $20,000), or 5%, represent the typical situation, and since returns of only 2% have thus far been made on sales of the last ten days an appropriate estimate of outstanding returns is 3% of $20,000, or $600. The necessary adjusting entries are as follows:

Sales Returns	$600	
Accounts Receivable—Allowance for Returns		$600

The debit entry brings the adjustment of current sales up to the full amount of returns applicable to such sales, on the basis of available data, and the credit serves as a contra to receivables and thus prevents overstatement of current assets.

It is also necessary to recognize the contingent asset involved. That is, if accounts receivable are offset by the full amount of expected returns, a special account (to be viewed as an adjunct of inventories) should be charged with the adjusted cost (cost less loss due to damage, etc.) of the goods which the vendor expects to recover. Assuming an amount of $400 the appropriate entries are:

Merchandise—Estimated Returns	$400	
Merchandise Cost of Sales.		$400

Since these entries are made at the close of the period, when inventories are taken and merchandise cost of sales is determined, the credit entry properly lodges in cost of sales.

In the next period, assuming adjustments as indicated, returns originating in connection with sales of the preceding period should, in strict accuracy, be segregated and applied to the special allowance account. However, if this procedure is deemed to be unduly precise all returns as accepted may be charged to the allowance account until the balance is exhausted, additional returns arising thereafter being treated as an adjustment of current sales. As returned merchandise applicable to last-period sales is received the merchandise account should be charged with an appropriate amount and the special adjunct account credited. The difference emerging, if small, may be treated as an incidental operating adjustment.

A somewhat simpler procedure to accrue the effects of prospective

returns would be to charge sales returns and credit a contra to accounts receivable with the difference between the selling value of estimated returns and the estimated value of the merchandise to be returned. This would make the use of a special merchandise account unnecessary.

Adjustments for outstanding returns in the case of cash sales will follow the same lines, but the suspense credit to customers will represent a form of liability rather than an offset to receivables.

Ideally the cost of returns should also be placed upon an accrued basis at the end of the period. This might be done by crediting cost of sales with the estimated loss in cost value applicable to estimated goods to be returned, crediting the various operating cost accounts with an estimate of charges applicable, and debiting cost of returns.

Recognition of Bad Debts. Uncollectible accounts, an unfortunate but common feature of selling on a credit basis, must be recognized periodically if overstatement of revenues and current assets is to be avoided. To the extent that the fact of uncollectibility becomes apparent during the period in which the account originates the controlling accounts receivable (and the specific accounts) can be credited and revenue charged with the amount of bad debts. However, to place bad debts on an accrual basis it is necessary at the end of the period to estimate the uncollectibles represented in outstanding accounts and credit a contra account, Accounts Receivable–Allowance for Bad Debts. The use of the contra account is a technical requirement in this connection in view of the fact that the estimate can not be deducted from specific accounts–not yet definitely determined to be bad–at this point. Later, as evidence of the uncollectibility of particular accounts develops, accounts receivable (and the specific bad accounts) are credited and the allowance account is charged.

For example, in the first year of operation the M Co. sells merchandise on account in the amount of $500,000. During the year particular accounts are written off as bad in the amount of $2,000. The entries are:

Sales—Bad Debts Adjustment	$2,000	
Accounts Receivable (and specific accounts involved) .		$2,000

At the end of the year it is decided that a reasonable estimate of uncollectibles for the year is 1% of credit sales, or $5,000, and that

an allowance should be accrued to cover the remaining $3,000 of estimated uncollectibles. Appropriate entries are:

Sales—Bad Debts Adjustment	$3,000	
Accounts Receivable—Allowance for Bad Debts. . .		$3,000

During the following year particular accounts originating in the first year totaling $2,800 are found to be uncollectible and are written off. The entries are:

Accounts Receivable—Allowance for Bad Debts . . .	$2,800	
Accounts Receivable (and specific accounts involved) .		$2,800

At this point—assuming that all receivables originating in the first year have been written off or collected—the balance of $200 in the allowance account might be closed to retained earnings as a correction of last year's income. In practice, however, it is not considered unreasonable to permit a small balance to be carried forward in the contra account as a safety factor.

In the income statement the charge for bad debts is preferably shown as a direct offset to revenue rather than as an expense, and the balance of the allowance account should be reported as a contra to accounts receivable in the position statement.

The subject of bad debts is discussed in more detail in a later chapter.

Allowance for Collection Costs. Although most of the applicable costs arise prior to or at the point of sale there are many cases in which revenues are recognized before all of the costs chargeable thereto have been literally incurred. A common example of an "after cost" is billing and collection expense. In most businesses no attempt is made to accrue the amount of such expense applicable to current credit sales that will be incurred after the close of the period. However, where billing and collection charges run fairly high it may be desirable at the end of the period to estimate the amount of cost that will be incurred in the process of collecting outstanding receivables and make appropriate adjusting entries. For example, during the first year of operation the M Co. sells product on account to various customers in the amount of $100,000. During the year collections amount to $75,000 and costs are incurred in billing and collecting activities—largely applicable to accounts collected—in the amount of $1,500. At the end of the year it is estimated that costs

will be incurred in collecting outstanding accounts of $475. The adjusting entries would be:

Billing and Collection Costs (assuming detailed classification of costs)	$475	
Accounts Receivable—Allowance for Billing and Collection Costs		$475

This adjustment provides for charging current revenues with the full amount of cost applicable thereto also and for showing receivables in the position statement at net realizable value. In the following period an appropriate portion of collection costs actually incurred would be debited to the allowance account, thus avoiding inclusion in next year's expense of costs applicable to the first year.

There is a minor objection to this procedure in that it calls for recording of costs prior to actual incurring in the usual sense. To meet this objection, and still secure the essential effects, the estimated cost to be incurred might be treated as a direct deduction from sales rather than as an expense. However, inclusion of the charge in expenses as shown above is preferable, as otherwise the full amount of applicable billing and collection expense would not be definitely disclosed.

Treatment of Trade Coupons. The customer is sometimes granted some right at the time of sale which will result in a cost to the vendor if and when the right is exercised. An example is found in the issuing of coupons or stamps which are redeemable—when presented in stated numbers or amounts—in merchandise. By issuing such coupons the vendor incurs a liability to customers which has the effect of a charge against current revenues and which should not be neglected in the preparation of the statements.

Where the coupons or stamps are redeemable in any merchandise in stock at regular selling prices the issue of coupons simmers down to granting an outright discount or allowance and should be handled accordingly. For example, in the first period of operation of the Queen Drug Co. sales for cash total $100,000, coupons issued in connection with these sales total $2,500, and sales represented by coupons turned in amount to $2,000. The following entries are appropriate:

(1)

Cash	$100,000	
Sales		$100,000
To record sales		

(2)

Sales Allowances—Coupons	2,500	
Liability represented by Outstanding Coupons . .		2,500
To record issue of redeemable coupons		

(3)

Liability represented by Outstanding Coupons. . .	2,000	
Sales		2,000
To record sales covering coupons presented		

This treatment in effect sets up a portion of the cash sale as an advance by the customer on a later sale. It also involves the assumption that all outstanding coupons will be redeemed, and the balance in the liability account, and the offset to gross revenue, is overstated to the extent that this assumption is unwarranted. Where less than complete redemption can reasonably be expected this condition should be reflected in the entries made.

Where coupons or wrappers are redeemable only from a special premium stock, a definite number or amount being required for each specified article, there is merit in a procedure which views the premium department as a service rather than a selling department and which accordingly makes use of cost prices throughout. To illustrate, assume that the King Soap Co.'s sales in a particular period amount to \$100,000, that the maximum amount of premium stock which might be claimed on the basis of these sales has a cost value, including all handling charges, of \$4,000, and that experience has shown that coupons presented for redemption amount to about half of the total issued. Under these conditions the liability for premiums may be accrued for the period as follows:

Sales Allowances—Estimated Premium Cost	\$2,000	
Liability for Premiums		\$2,000

The next step consists of charging the liability account and crediting premium merchandise (and any other cost accounts involved) as articles are issued from premium stock in exchange for coupons presented. This step also may be recorded in the ledger in terms of period totals rather than individual deliveries.

Adjustments for Guaranties. Some products are sold under quality and service guaranties, and where experience shows that expenditures on this account are substantial an accrued adjustment of revenue, and a corresponding recognition of the estimated liability to customers, is advisable. To illustrate, assume that the Shaw Co. sells

100 units of office equipment at a price of $100 each under an agreement by which the vendor is obliged to make all necessary adjustments, and replace any parts which prove to be defective, for a period of one year from date of sale. On the basis of past experience the average cost of maintaining this special service is estimated at $5 per unit. The entries covering the original estimate are:

Sales Adjustment—Estimated Cost of Guaranties	$500	
Liability for Service Guaranties		$500

The liability account represents an obligation to customers as a group, payable later in repair and maintenance service to particular customers as conditions determine. As costs on this account are incurred they are chargeable to the estimated liability. It should be borne in mind in considering this and similar situations that costs as actually incurred can not be expected to coincide precisely with provisional entries, and that special adjustments are consequently required from time to time.

As in the case of other "after costs" there is point in holding that post-sale service costs applicable to current revenue should be charged to an appropriate operating expense account instead of being treated as a sales adjustment, and again the only objection is the somewhat theoretic consideration that a part at least of such cost will not actually be incurred until a later accounting period. The effect upon net income is the same under both interpretations.

Where experience gives little clue to the amount of costs which will be incurred under guaranties there is not much point to attempting to place the effect on a regular accrual basis, although in the presentation of a statement of financial position some reference to the contingent liability involved is needed.

Charges for Containers. In some lines the product is delivered to the customer in casks, drums, reels, or other types of durable containers, capable of repeated use, and the vendor's investment in such assets often amounts to a substantial sum. In this situation some arrangement must be provided to facilitate careful handling of containers, and to insure proper treatment of customers' accounts in connection with returns.

Under one plan, particularly convenient where the containers are specialized in form and very durable, the title to such property is considered to reside at all times in the vendor and no special charge

is made therefor to the customer. When this arrangement is employed the outgoing container is covered by a separate memorandum invoice or by a memorandum item on the regular invoice, and a careful record is maintained of containers as returned. In some cases the customer is required to make an initial deposit to insure responsibility and to cover containers which may be lost or broken while in the customer's hands. This plan is simple in that no adjustments of revenues or receivables are required—except in special cases—and containers are accounted for on the vendor's books as are other fixed assets. If desired, containers shipped may be charged to a special account, which is credited when returns are received.

Under a second plan containers are assumed to remain the property of the vendor but are billed to customers at a fixed price, the amount being refunded or credited to the customer if the containers are returned in a stated time in good condition. In this case a reasonable treatment is to credit consigned containers to a special account rather than to sales, an account which is charged at billing price as containers are returned. To illustrate assume that the Bow Chemical Co. ships its product in metal cylinders which are charged to customers at $5 each, and that in a particular period the total sales amount to 1,000 units, invoiced at $25 each, including charge for cylinder. Assume, further, that during this period 900 cylinders are returned in good condition. The following entries indicate the treatment to be accorded:

(1)		
Accounts Receivable (and individual accounts) . .	$25,000	
Sales		$20,000
Allowance for Containers Consigned		5,000
To record sales and charges for containers		
(2)		
Allowance for Containers Consigned.	4,500	
Accounts Receivable (and individual accounts) . .		4,500
To record return of 900 cylinders		

Where the particular customer has paid his account in full prior to returning containers, the credit on return represents an allowance to be applied to succeeding charges. In the case of refunds the credit would of course be to cash. To the extent that containers were permanently retained by customers the allowance account would be charged at the billed price, the asset account with containers would be credited, including adjustment of allowance for depreciation, and

the gain or loss, if any, recognized, as in the case of the disposition of any fixed asset.

The credit balance in the allowance for containers may be viewed either as a liability akin to that representing customers' advances and deposits, or as an offset to the stated amount of receivables. In view of the fact that the containers outstanding are assumed to be an asset of the vendor, until the customer has indicated intention to retain, the later interpretation is preferable, particularly where substantially all units are regularly returned.

In the case of bags, bottles, and similar containers the rebate offered for returns per unit is a small amount, often less than the cost price, new, and with this condition it is not surprising that a substantial percentage of the containers shipped is not returned. The expedient treatment in this situation is to make no separate charge to the customer and to credit sales with the entire amount of the invoice. This means that the cost of the containers used in delivering the product is dealt with as an ordinary operating cost. Moreover, if returned containers are worth the allowed rebate it is not necessary or desirable that an account be set up for estimated containers to be returned. Instead return of containers may be treated as a purchase of shipping supplies, at a fair price.

If returned containers are of no value to the vendor and an allowance is made to the customer as a form of special rebate, the amount allowed is an adjustment of gross book revenue and nominal receivables, and the adjustment should cover the estimated allowance outstanding, as in the case of the more usual forms of discount. Similarly if the allowed price for returned containers exceeds their fair value to the vendor the amount of such excess constitutes a type of sales allowance and should be dealt with accordingly.

Transportation Costs on Sales. Out-freight and other shipping and delivery costs on sales are in general operating charges, to be debited to the appropriate expense accounts, and have no peculiar relation to the revenue account or to accounts receivable. Under some conditions, however, transportation charges may appear to have the effect of a sales adjustment. A case on which opinions differ arises where goods are sold as of final destination or some other delivery point, freight charges collect. Here the vendor assumes responsibility for the delivery costs, and the customer accordingly deducts the freight he pays from the amount of the invoice in remitting. If, in this situa-

tion, the customer is charged with the full amount of the invoice, the estimated amount of transportation cost must be credited to an allowance for freight, a contra to accounts receivable. Then when the customer's remittance for the net amount is received, with statement of freight paid attached, the allowance is charged, adjustment being made for any discrepancy. The question is, what account on the vendor's books should receive the debit which matches the credit to the contra account? If the customer is assumed to be acting as the vendor's agent, in effect advancing the cost of freight for the vendor's account, the proper charge on the vendor's books is to transportation expense, as in the case where the charges are incurred and paid directly. If, however, the customer can be said to be the party who "buys" the service of the common carrier, despite the understanding with the vendor, the latter does not, strictly speaking, incur transportation cost, and the charge should be handled as a sales allowance. On the whole the first treatment seems to be the more reasonable.

Where goods are sold f. o. b. vendor's plant, and the vendor, acting in effect as the customer's agent, prepays (or assumes) the freight for the latter's account, the cost is clearly an additional charge to the customer, rather than a cost of operation. Further, this amount is credited to cash (or, first, to the account of the transportation agency) and should not be included in sales. If as a matter of convenience the invoice is drawn including the freight cost and the gross amount is initially credited to sales, an adjustment must be made which treats the transportation charges as a sales deduction. This case must not be confused with the situation in which the vendor pays transportation charges on his own account as one of the costs of operation.

Questions

1. Discuss the alternative interpretations of the charge to sales discount. Which is preferable and why?

2. Outline two procedures for recording sales discounts and illustrate each.

3. With illustrative entries show how discounts on prepayments should be accounted for.

4. Under what circumstances may special allowances and rebates be interpreted in whole or in part as an offset to nominal revenue figures? As a departmental expense or loss?

5. Under what circumstances should special discounts to employees be interpreted as an operating cost? Give illustrative entries, and discuss the question of the type of cost involved.

6. Which of the following is the proper basis on which a used car acquired should be charged on the dealer's books: (a) nominal allowance to customer;

(b) estimated net realizable value; (c) wholesale cash cost? Discuss. Give an example of a sound treatment, including illustrative entries.

7. Explain and discuss the treatment of the "loss" on the used-car department as an element in the cost of selling new cars.

8. Discuss the accounting for sales returns and exchanges.

9. How may losses assignable to sales returns be estimated and accounted for? Illustrate.

10. Why should prospective returns by customers, on sales already made, be taken into account by the vendor at the close of the accounting period? Give illustrative entries.

11. The issue of trading stamps to customers redeemable from regular stock gives rise to what accounting problem? Illustrate.

12. How should outstanding premium coupons and the issue of premium merchandise be accounted for? Illustrate.

13. Illustrate the use of an account entitled "liability for service guaranties."

14. Outline the treatment of charges for containers when the containers are assumed to remain the property of the vendor. When the containers are considered to be actually sold. If the allowed rebate is more than the value of the container to the vendor what treatment is proper?

15. How should estimated freight, to be paid by customer and deducted from the amount of the invoice, be handled on the vendor's books? How should freight prepaid for customer's account be treated?

XVIII

PERIODIC PROCEDURE AND ANALYSIS

Accounting Period. From time to time in the preceding pages the accounting period has been referred to, and considerable attention has been directed to the special adjustments required at the close of each period. At this point it is necessary to lay additional emphasis upon the significance of periodicity in the accounting process, and to give more systematic consideration to the important technical operations and analyses which must be regularly undertaken.

The accounting period is the unit of time selected as a basis for the determination and presentation of the reports of income and financial position. In the majority of enterprises the principal period is the fiscal year, which may or may not coincide with the calendar year. The subordinate period most often employed is the month or quarter. A few concerns, impressed with the awkwardness of using the irregular calendar months as interim periods, have been experimenting with a year of fifty-two weeks, divided into thirteen intervals of four weeks each.

That business affairs must be accounted for in terms of periods of some length is clear. As explained earlier, a complete presentation of the underlying facts of income and financial position from day to day is out of the question in most situations; it is only *periodically* that it is feasible to attempt to reduce the stream of data representing the events, processes, and conditions of business operation to their lowest terms. Explicit transactions such as purchases, sales, collections, payments, and so on may be reflected in the accounts substantially as they occur, but the implicit, internal processes, focusing in the flow of values from the enterprise as charges to revenues, can scarcely be dealt with effectively except in terms of periodic adjustments. The everyday routine of accounting, therefore, must be

supplemented by periodic procedures based upon valuations, accruals, and analyses, for the purpose of carrying the work to fruition in the form of reports covering the results of operation and the current status of the enterprise.

Although the important accounting period is that in terms of which the regular income statement and position statement are prepared, other occasions arise, more or less regularly, which require some of the technical operations characteristic of the work at the close of the period. Journal columns often must be summarized and proved in terms of days or weeks. Certain accounts—cash, for example—are often footed daily. Comparisons of subsidiary ledgers and corresponding controlling accounts must be frequently made. Special reconciliations, such as that of bank account and bank statement, are on a weekly or monthly basis. In some cases the general trial balance is prepared at a number of interim points, as a check on the accuracy of the entire bookkeeping procedure. Further, in many companies the process of measuring and distributing operating costs on the basis of special analyses and accruals is under way more or less continuously. There is often a considerable overlapping, in other words, between the stream of routine recording and the work of periodic determination and adjustment.

Cycle of Accounting Operations. In Chapter VIII an outline of the main steps in the bookkeeping process was presented. At this point the cycle of accounting procedure and analysis may be stated more broadly, in terms of the principal operations or stages, as follows:

1. Analyzing business transactions into debit and credit entries with appropriate account captions and recording these entries systematically in suitable columnar media—often referred to as "journalizing."
2. Assembling the debit and credit entries by ledger accounts—posting.
3. Summarizing the ledger—footing the accounts and setting up the trial balance, including reconciliation of subsidiary ledgers and controlling accounts.
4. Ascertaining and interpreting the supplementary data required for periodic adjustments—depreciation, inventories, accruals, etc.
5. Preparing columnar classifications of statement data based upon trial balance and adjustments—the "work sheet."
6. Setting up and recording (journalizing and posting) the adjusting and closing entries (often accomplished in part in connection with step 5).
7. Balancing and ruling the ledger accounts, including any final check on the equation of debits and credits.
8. Constructing the periodic statements—income statement, position statement, and supporting schedules and exhibits (and any special reports required).

This tabulation does not purport to represent a detailed outline of procedure, particularly in that it contains no reference to underlying forms and documents and the methods of accumulating the original entries. The first step as listed is undoubtedly a very long stride and includes a large part of the total volume of day-to-day accounting work. The purpose here is to indicate the primary technical operations and stages of accounting, in proper order, and to emphasize those features which are most prominent at the close of the accounting period. It should be added that with respect to order the final stage, the construction of statements, may follow directly after the fifth step.

Is the accountant responsible for the actual "ascertaining" of the values of inventories and other assets? On this question there is some difference of opinion. All are agreed that adequate value data must be available, and that it falls to the lot of the accountant to interpret and use such data. Some hold, however, that making the underlying determinations and estimates is outside the proper scope of the accounting department. Like all matters involving the precise limits of activity for particular professional groups, the question is hardly worth debating. The most reasonable position, in the light of present-day conditions and tendencies, is that which views the accountant as a consultant in connection with the problems of valuation in the business enterprise, if not actually in charge of the work.

In this and the next chapter the discussion will be confined to steps 3, 4, 6, 7, and 8, with the emphasis on adjusting and closing entries. Use of the work sheet in connection with periodic procedure and statement preparation is dealt with in Chapter XX.

Summarizing the Ledger. A preliminary operation at the close of each accounting period is the preparation of a ledger summary or general trial balance. This device, as explained in Chapter VII, is a columnar tabulation of the ledger accounts either by debit and credit totals or by net debit and credit balances. As a first stage in the work of preparing periodic statements the trial balance of differences is the more satisfactory scheme of compilation, and this form will be employed from this point on. Ordinarily only open accounts are listed in this summary, although accounts currently in balance or account titles with no current entries may be included if this is likely to be helpful in the preparation of adjusting entries. The general practice is to present controlling accounts in the general trial balance,

A. B. SMITH COMPANY
Trial Balance of General Ledger
December 31, 1949

F	Account Titles	Dr.	Cr.
1	Cash	$ 500	
30	National City Bank—Commercial Account	10,000	
35	U. S. Bonds	5,000	
40	Accounts Receivable	13,900	
41	Allowance for Bad Debts		$ 200
45	Notes Receivable	5,000	
50	Merchandise	45,000	
55	Supplies	500	
57	Insurance	700	
85	Store Equipment—Cost	6,000	
86	Office Equipment—Cost	2,100	
88	Delivery Equipment—Cost	2,000	
89	Equipment—Allowance for Depreciation		2,000
120	Accounts Payable		6,700
150	Notes Payable		10,000
160	Payroll		300
165	Taxes Payable		500
180	Capital Stock		30,000
190	Retained Earnings		1,350
245	Store Wages and Salaries	7,000	
246	All Other Store Costs	2,000	
255	Office Wages and Salaries	3,000	
256	All Other Office Costs	1,000	
265	Delivery Wages	2,000	
266	All Other Delivery Costs	2,000	
275	Administration Salaries	4,000	
276	All Other General and Administration Costs	1,900	
281	Advertising and Sales Promotion	2,000	
284	Rent of Building	2,400	
290	Tax Costs	3,000	
300	Sales		70,000
320	Interest Charges	200	
325	Interest Revenue		150
		$121,200	$121,200

with the balances of the accounts of the subsidiary ledgers tabulated in the form of supporting schedules. The arrangement of account titles usually follows their order in the ledger. In the example on this page the accounts which are primarily of position-statement character are presented first, followed by the current cost and revenue accounts. In this example the use of the "all other" titles is for the purpose of simplifying the illustration, not to suggest that such comprehensive accounts are a desirable feature of actual practice; each of such accounts given should be thought of as representing a more or less numerous group of operating accounts.

The trial balance, as was pointed out in Chapter VII, has two main functions: (1) it serves to demonstrate the columnar accuracy or inaccuracy of the accounts as recorded; (2) it furnishes a convenient transcript of the ledger to serve as a basis (when coupled with the data of valuations, accruals, etc.) for the preparation of the financial statements. The first purpose may call for the preparation of such a summary monthly, weekly, or even (in rare cases) daily; the second requires the preparation of the trial balance only at the close of each regular fiscal period.

The importance of the trial balance as a means of checking the bookkeeping processes of recording debit and credit entries and of assembling these entries in ledger columns has been stressed earlier. There remains to be discussed here the problem of discovering errors when the trial balance fails to prove, and the limitations of such proof as an indication that the underlying accounting has been accurate and sound. The importance of the ledger summary in the work of making adjusting entries and preparing statements will become apparent as these subjects are considered in this and later chapters.

Discovering Errors. If the trial balance fails to prove upon the first attempt it is evident that one or more errors has been made. The only sure method of finding errors is to check each page of the journals, check the entire process of posting, verifying interim ledger footings and forwardings, and recalculate the final footings. This means a great deal of additional work, but there is no royal road to the discovery of errors. In this connection the importance of accurate work in the original processes of journalizing and posting requires emphasis. Each columnar journal page or other form of medium used should be carefully proved, as the work progresses, to avoid the perpetuation of errors in the ledger, and great care should be taken to insure completeness and accuracy in the work of transferring individual entries or totals to the ledger. The bookkeeper saves time in the long run by taking particular pains with the original recording. The use of machine methods of computing and recording tends both to prevent errors and to disclose promptly such mistakes as are made. An adequate system of continuous internal audit and check is also of assistance in this connection.

If the difference between trial balance footings is an even number the error may sometimes be located by dividing this difference by

two and then glancing through the trial balance or through the books to see if there is an item of this amount. If such a figure is discovered it is probable that it will be found in the wrong column, where it would evidently cause a difference between column totals of just twice its amount. If half of the difference between the debit and credit totals is an unusual amount the bookkeeper may be able to recall meeting an item of this amount, and thus be able to trace the error back to a particular transaction or posting. This suggestion, of course, applies primarily to the pen-posted books of comparatively small concerns.

If the difference between the debit and credit totals of the trial balance lies in one digit only it is very likely that the error is arithmetical, and can be disclosed by a careful checking of trial balance and, if necessary, ledger calculations. In fact, the error or errors is likely to be of this type if there are differences in several figures provided a number of corresponding digits—particularly those of the cents columns—are the same. In this connection it may again be noted that if the trial balance is prepared in terms of net debit and net credit balances, rather than total footings, great care should be taken in calculating account balances, particularly if this process is attempted without the aid of a machine.

Errors are often due to transposition of figures in copying, to improper location of decimal point, and to the insertion or omission of figures, particularly zeros. The error is likely to be of this class, it has often been pointed out by those mathematically inclined, if the difference between the provisional trial balance totals is divisible by nine. This test, however, is of no value where more than one mistake has been made. Further, the discovery that an error of this type is involved is likely to be of little help in locating the actual mistake.

Accounts containing large errors may often be isolated merely by scrutinizing carefully the trial balance figures, account by account. If the merchandise account, for example, shows an absurdly large or small figure the fact should be at once apparent to the experienced bookkeeper, assuming that he is familiar with the operating conditions of the particular enterprise.

In compiling the trial balance care should be taken to see that no open accounts are omitted and that any accounts that are omitted actually are in balance. It is of course necessary that the footings of any journal columns or other specialized records used in lieu of

ordinary ledger accounts should be included in the general trial balance. Further, where controlling accounts are represented in the trial balance the supporting subsidiary accounts must be excluded if duplication is to be avoided.

A not uncommon mistake which may be rather difficult to locate is the failure to post a particular item from a journal entry comprising several figures. If there is an omission in the folio column of the journal such an error is readily disclosed by an examination of this column in the journal. If, however, the entry has been checked as if posted, when posting has not actually been accomplished, nothing short of a systematic checking of the process of posting will locate the omitted item.

Limitations of Ledger Proof. It needs to be pointed out that not all errors, in the broad sense, are brought to light or indicated by the failure of the trial balance of ledger entries to prove. The trial balance footings may be precisely equal although the accounting is seriously defective. The fact that the trial balance proves simply demonstrates the columnar harmony of the books; it shows that debits equal credits, nothing more.

A serious error not disclosed by the trial balance is the complete omission of the record of a particular transaction. Suppose, for example, that a customer pays cash on account and that the bookkeeper embezzles the amount and makes no entry whatever. Clearly the accounts would not be correct although the equation of debits and credits would be in nowise disturbed. Without any system of internal check such an error would be discovered only through the insistence on the part of the customer, later, that the amount in dispute had been paid. If the entry were omitted through carelessness without accompanying embezzlement, the count of cash would of course disclose an overage, although this would not of itself indicate the precise origin of the discrepancy.

Improper classification of entries with respect to particular accounts and types of accounts does not disturb the trial balance proof provided the columnar classification is correct. The cost of an addition to plant, for example, may be charged to current maintenance account. This is an error in the most fundamental sense and if not corrected will affect the integrity both of the income statement and the statement of financial condition. But such improper treatment of a cost incurred will evidently have no effect upon the equality of

debit and credit totals. Charging the cost of a salesman's salary to an account intended to be restricted to salesmen's traveling expenses is an illustration of a less serious mistake of this order which would not be disclosed by taking a trial balance.

The wrong account may be charged or credited purely as a result of carelessness. If a particular customer, for example, pays his account and the account of another customer is credited, a mistake has occurred which is likely to be very annoying and yet which does not disturb the equation of column totals. In this situation, further, the controlling account in the general ledger is not affected by the error. Another case of this type of error is occasionally found in banking when checks are charged to the wrong depositor's account.

If the same error is made on both sides in recording a transaction the trial balance will still show equal footings. Suppose, for example, that a sale on account is not correctly calculated, or is not correctly copied from the invoice, and that the wrong amount is accordingly charged to the customer and credited to revenue. Such a mistake evidently does not disturb the equation of debits and credits and might indeed never be discovered. Similarly, if the debits and credits of a particular transaction are interchanged an identical error is made in each column. Rare cases are reported where the trial balance has shown that column totals were equal notwithstanding the existence of a number of unrelated mistakes.

Making the ledger prove is not the final end and goal of accounting, as some bookkeepers seem to think, notwithstanding the importance of this test of the integrity of the recording operations. Accuracy in the full sense, as has just been indicated, is not demonstrated by the maintenance of the equation of debits and credits, and in some cases the time and effort spent in locating small errors—for which an adjustment might have been readily made—seems hardly justified. On the other hand it is often true that what appear to be minor errors are the resultant of many serious blunders, and lax treatment of discrepancies is accordingly a dangerous practice. It is also a familiar fact that where errors are found in the main technical scheme of entries as recorded, the more serious faults of omission and improper classification by accounts are likely to be present.

Valuations and Accruals. The fourth step in the cycle of operations listed on page 359—"ascertaining and interpreting the supplementary data required for periodic adjustments"—covers a great deal of ter-

ritory and is of vital importance. It is precisely at this point that the limitations of bookkeeping records and procedures—however highly perfected—become apparent and the judgmental and analytical aspect of accounting assumes a dominant role. The ledger accounts as they appear in the trial balance are commonly incomplete in that the utilization of goods and services in production has not yet been fully recognized and, what is more important, the assignment of costs to current revenues has not been effected. A process of valuation and interpretation is indispensable if these gaps in the record of the affairs of the enterprise are to be properly closed. Moreover, with respect to the contractual services which are primarily on a time basis it is seldom that the day-to-day recording of transactions results in a full recognition, precisely to the end of the accounting period, of the costs and payables incurred and revenues and receivables accrued.

The general status of the accounts at the close of the period, and the nature and extent of the adjustments consequently required, vary between enterprises. In most lines, particularly in the case of the smaller companies, the work accomplished prior to the date of the trial balance is largely restricted to a more or less adequate recording of explicit business transactions—purchases, sales, collections, etc. In manufacturing and to some extent in other fields, on the other hand, systems of continuous inventory and cost analysis have been established by many concerns which provide for regular recognition, at least in part, of the effects of internal operations, and which may include the assignment of certain types of cost to current revenues before the end of the period. In such circumstances the work of valuation and accrual is modified in accordance with the cost procedures in effect. But even in the case of the most complete cost systems not all types of valuation and analysis are fully taken care of from day to day, and in any event a periodic overhauling is necessary as a means of verifying the work which has been done.

Scope of Valuations. One of the principal valuation problems is the measuring of depreciation—that part of the cost of plant assets which is assignable, first, to operations and, finally, to revenue charges (ignoring for the moment the possibility of treatment as an outright loss). The determination of depreciation is in part a matter of physical examination and appraisal, and in part a question of long-run analysis and financial policy. The crux of the problem is the

estimate of service life and salvage or residual value in view of the nature of the asset, the conditions of maintenance, the status of the enterprise, and all other pertinent data. Scarcely less difficult and important is the selection of a method or system of spreading the cost to be amortized in a reasonable manner over the expected life. The quantitative importance of the depreciation charge varies with the nature of the enterprise. Where production requires the use of extensive plant facilities, as in the railway and other utility fields, this factor is a major cost of operation; in many trading enterprises, on the other hand, depreciation is a relatively minor cost. Except for the process of accruing depreciation, it should be added, revaluation of depreciable assets is undertaken only on special occasions.

Ascertaining the value of goods on hand at the close of the period represents a second major valuation problem. In many trading and manufacturing concerns, indeed, the determination of inventories is the central adjustment, outweighing all other valuations and accruals employed in finding the amount of net income, and in all enterprises whose operations involve the use or handling of such assets in considerable volume the inventory is a factor of importance. The work of measuring the inventory consists of two principal tasks: (1) finding the physical quantities, properly classified; (2) translating these quantities into value terms through a sound system of cost allocation and pricing. The first task requires careful preparation, including the development of suitable forms, and accurate methods of enumerating, weighing, etc., and of compiling and tabulating. The second phase of the work likewise requires suitable forms, and efficient and accurate procedures. Pricing the inventory also involves the selection of a sound basis of valuation, and discriminating application of such base. For the time being it will be assumed that actual cost is, in general, the proper evidence of the value of standard goods on hand. Special adjustments are necessary in the case of damaged or obsolete stock.

Land is subject to changes in market value but accounting ordinarily does not attempt to follow these changes from year to year. In the case of wasting assets such as mineral deposits the amount of depletion must be regularly recognized, and other adjustments may be justified in some circumstances. Intangible assets such as patents and other terminable rights must be regularly amortized, but amortization is not required in the case of intangible values that may be expected to persist indefinitely.

Cash is seldom subject to valuation in the ordinary sense, although adjustments for shortage or overage, and for special deductions arising in connection with the bank balances, may be needed. The valuation of accounts receivable is primarily a matter of proper allowance for bad debts, discounts, etc. In the case of current notes and bills the factor of accrued interest is important. The valuation of securities held is a special problem. For securities not readily marketable the retention of cost figures, barring unusual circumstances, is generally conceded to be expedient, and even in the case of marketable investments many accountants favor periodic reporting at cost, with estimated market values shown parenthetically on the position statement. Prepayments for insurance and other services must be apportioned between periods and also—in some cases—between inventories and expenses.

Depreciation, inventory pricing, and other valuation problems receive further attention in later chapters.

Adjusting Entries. The entries required to introduce into the accounts the supplementary data of valuations and accruals are commonly referred to as "adjusting entries." Such entries have for their essential purpose the completing and clarifying of each ledger account from the point of view of the preparation of the periodic statements, the income statement and position statement. Although not bulking large as a rule in the total volume of entries recorded throughout the period, the adjusting entries represent perhaps the most critical and significant stage of the entire procedure.

In general the regular processes of journalizing and posting should be utilized in recording the adjustments in the accounts. An adjustment, that is, should be viewed as an actual transaction, for accounting purposes, and should be dealt with accordingly. For certain types of situations direct ledger recording as in the case of balancing entries is feasible, particularly where mixed accounts are employed, but this form of procedure is not recommended. The convenient type of journal for adjustments is the simple, two-column form, rather than the specialized media. In setting up adjusting entries it is desirable that full explanations be attached and that all supporting calculations and schedules, together with written authorizations, be carefully filed.

In terms of types of entries required periodic adjustments may be grouped as follows:

1. Recognition of charges and liabilities incurred and not booked in full, and adjustment of nominal cost and liability figures on account of discounts, allowances, etc.
2. Reclassification of cost data to indicate utilization in operating processes.
3. Division of costs incurred, whether in original or reclassified form, between asset balances on the one hand and income statement accounts on the other.
4. Reflection of accrued receivables and earnings on the books.
5. Adjustment of gross revenue and receivable figures in view of mode of settlement, returns, guaranties, uncollectibility, etc.
6. Write-off of assets—receivables, securities, plant, etc.—following establishment of estimated allowances, and write-off where no provision has been made.
7. Evaluation of securities, land, plant, and other assets in terms of effect upon the proprietary equity.
8. Restatement of the proprietary equity (e.g., the segregation of a portion of retained earnings in a special account).
9. Correction of ordinary errors.

This list is sufficiently exhaustive to cover virtually all cases. A particular adjustment, of course, may represent a combination of two or more types.

Adjusting Entries—Discussion of Main Types. The first type of adjustment listed above (excluding the entries required in connection with the booking of nominal figures for costs and payables, discussed in Chapter XIV) represents the completing of the process of recording commodity and service costs incurred, with the related liabilities, to the end of the period. It often happens, for example, that not all purchase invoices have been entered in the accounts by the end of the period—as a result either of unusual delays or the ordinary lag in the process of checking and recording. Moreover, under some circumstances goods in transit are viewed as the property of the buyer and hence as costs of the current period. Adjustments to take care of such conditions should generally be recorded in the same manner as other purchases, through the use of the regular forms and records employed. In terms of general-ledger entries the adjustment consists of a debit to merchandise or other appropriate account and a credit to accounts payable. Similarly, in most cases, services will have been received from employees which have not been recognized in full and appropriate adjustments must be made to complete the record. There is also the need for accruing rent, tax charges, etc. to the end of the period. A number of examples were given in Chapter XV.

The second and third classes of adjustments as listed are closely related as a matter of procedure and taken together constitute the

most important group in the typical case. Examples of the second class are the application of the costs of transportation, storing, etc. to merchandise or materials accounts, and the transfer of the costs of labor, materials, etc. to work in process. The third class includes the conversion of original cost factors at the proper time directly into revenue charges, as in the case of the utilization of shipping supplies and depreciation of delivery equipment, the charging of costs incurred to expense, without conversion, on the ground of expediency, as is usually done for office and administrative charges, and the division of accounts showing accumulated costs of merchandise between inventory balance and cost of sales.

Some accountants would object to a definition of adjustments so broad as to cover all entries representing the "internal transactions" —the reclassification of costs incurred including division of costs between income-statement and position-statement elements. The reasonable position to be taken depends on the circumstances. For concerns which attempt little by way of a day-to-day cost accounting such tracing of costs as is made at the end of the regular period may well come under the head of adjustments. In the case of manufacturing concerns employing systematic cost procedure, on the other hand, there is slight justification for the treatment of all entries covering departmental cost classification and the various steps in the accumulation of charges to work in process, finished goods, and, finally, factory cost of sales as "adjustments." In such situations the adjusting entries are merely those necessary to complete the process of cost accounting to the closing date and recognize changes based on the periodic valuations.

A number of examples of the recognition of interest accrued receivable, falling in group four, have been given in earlier chapters. In all cases of this class the adjusting entries involve a charge to an accrued receivable and a credit to a revenue account. Adjustments of the fifth class have been illustrated in Chapter XVII. The entries for this type usually simmer down to a charge representing an offset to gross revenue and a credit representing either a contra to receivables or a special form of liability. The write-off of assets, the sixth type, is recorded by a credit to the asset account, an appropriate debit to the contra allowance account, and an adjustment of current income or retained earnings, according to the circumstances.

The revaluation of assets to give recognition to market value or other form of present value as determined by appraisal or otherwise

(group seven) is an important question which has been the subject of a great deal of discussion and debate in recent years. This question, however, involves serious problems of policy and procedure and cannot be considered here. For the present it is sufficient to note that occasions for adjustments under this head are not uncommon. Discussion of restatements of the proprietary equity in connection with such transactions as stock dividends, reserve accumulations, etc. (group eight) must also be postponed, for the most part, until there is an opportunity to develop the subject of corporation accounting more intensively.

Adjustments representing corrections of errors (group nine) are made either by reversing entries improperly made and recording the correct entries, or by making an appropriate net adjustment. Assume, for example, that on the books of the M Co. in recording the borrowing of $1,000 from the bank on the Company's own note the amount of $1,000 was credited to notes receivable rather than to notes payable. The adjusting entries, upon discovering the error, would be:

Notes Receivable	$1,000	
Notes Payable		$1,000

The method of net adjustment is applied here, as there is evidently nothing to be gained by disturbing the cash account, which is correct as it stands. Where books are out of balance and the discrepancy cannot be definitely traced it is sometimes necessary to make a net adjustment of retained earnings on the basis of the verified current status of assets and liabilities.

Closing Entries. After all adjustments have been recorded each ledger account should represent a clear-cut condition or status having a definite relation to the income report or to the position statement. The next step is "closing," the preparation and recording of the entries necessary to summarize all income statement data and incorporate the final effect in the proper equity account or accounts. When this process has been completed, including the ruling and balancing of all accounts, the ledger is again reduced to its lowest terms, displaying only asset, liability, and proprietary balances (including the permanent or long-term contra accounts). As in the case of adjusting entries it is recommended that closing entries be recorded by means of the regular processes of journalizing and posting.

Here, too, the most suitable medium is the simple, two-column journal form.

The closing entries required in the typical case may be outlined under the following stages or steps:

1. Closing current contra accounts modifying revenues or costs to the parent accounts.
2. Transferring all revenue balances to a suitable summary account.
3. Transferring all expenses, losses, and taxes to a suitable summary.
4. Closing the balance of the expense and revenue summary to the income summary account.
5. Transferring interest and dividend charges to the income account.
6. Closing the balance of the income account to retained earnings.

In connection with this outline it should be noted that while the order given is generally satisfactory it would not be necessary to adhere to it precisely in all cases. Attention should also be called to the possibility of elaborating the procedure, particularly in the third and fourth steps, through the use of one or more levels of intermediate summaries. In large concerns, further, where there are numerous departments, branches, and other types of divisions, there may be a separate process of closing up to a certain point for each such section of the business.

The distinction between adjusting entries and closing entries should be emphasized. The former are made for the purpose of recognizing facts not present in the trial balance in any form, and of clarifying and passing judgment upon the final disposition—in the statements—of data already recorded. The latter represent the largely clerical process of transferring and summarizing recorded figures whose character has been fully determined and revealed. The distinction, however, although clear in principle, is not hard-and-fast at all points in actual practice. For example, the transfer of office expense to the operating summary is a closing operation in so far as it represents mere shifting from page to page in the process of summation; it can be viewed as an adjustment to the extent that it reflects a judgment to the effect that this item of cost is not assignable to inventories and is chargeable in full to the revenues of the current period. Notwithstanding these difficulties of definition, and the fact that it makes little difference which label is attached to a particular step in the procedure, the general distinction is useful in facilitating an understanding of the periodic operations.

Closing entries as defined here should not be confused with bal-

ancing entries employed in the process of footing, ruling, and redating. As has been explained, in balancing ledger accounts at the close of the period (or on any other occasion when it may be desirable to strike a balance in formal fashion) it is common practice to equate the two sides and display equal final footings by adding the actual balance to the opposite side, whichever that may be, the balance then being rewritten below the ruled footings. This operation serves to reduce the account to its lowest arithmetical terms and to indicate sharply the advent of the new period. It is worse than waste motion to attempt to journalize such balancing figures (although this is possible, as has sometimes been suggested, by posting the balance shown above the footings as of the last day of the current period, and posting the balance below the footings as of the opening of the succeeding period). A balancing operation is confined to a single account and brings about no actual change in the status of that account. There is, therefore, no reasonable sense in which mere balancing can be viewed as a transaction, technical or otherwise, requiring journalization and posting. In the case of true closing entries, on the other hand, at least two accounts, on different pages or sheets, are affected in each case, and where such entries and the accounts involved are numerous there is some gain from a clerical point of view in making use of the regular mechanism in recording. Further, the closing entries, set up in journal form, constitute a systematic showing of the process of closing, which would otherwise be buried in entries scattered throughout the ledger. This is an important point in connection with the tracing or checking of the periodic operations.

Closing Entries Illustrated. As an example of the closing of a contra revenue account assume that the sales-discount account of the M Co., after all adjustments have been recorded, shows a debit balance of $2,000. The proper closing entries are as follows:

Sales	$2,000	
Sales Discounts		$2,000

It would be no serious blunder in this case to close discounts directly to a summary account (intermediate or final), but there is some point in handling the matter in such a way as to disclose net adjusted sales in the main sales account.

To illustrate the second step listed on page 372, assume that after all adjustments, including closing of modifying contra items, the

sales account of the M Co. shows a credit balance of $75,000. The closing entries then are:

Sales	$75,000	
Expense and Revenue		$75,000

If an intermediate departmental summary were employed the adjusted departmental sales figure would of course be closed to such a summary rather than to the main expense-and-revenue account.

Step three may be illustrated by assuming that advertising expense, adjusted, stands at $1,000. The closing entries are:

Expense and Revenue.	$1,000	
Advertising Expense		$1,000

The question of departmental differentiation may also arise in this connection, and the general procedure indicated must be appropriately modified where departmental grouping is in effect. Further, an intermediate summary designed to show all selling costs, for the department or for the business as a whole, might be used, and in this case advertising would be closed to such summary, thus finding its way indirectly, by two steps, to expense and revenue.

To illustrate the fourth step, assume that expense and revenue, after all transfer entries have been made, shows a credit balance of $5,000. Closing this balance to the income account is accomplished by posting the following:

Expense and Revenue.	$5,000	
Income		$5,000

The fifth step may be illustrated by assuming that the interest charges, after adjustments, stand at $500. The closing entries are:

Income	$500	
Interest Charges		$500

Finally, if the income account after all adjusting and closing entries have been posted shows a credit balance of $4,000, the entries to close to retained earnings are:

Income	$4,000	
Retained Earnings		$4,000

Extent of Adjusting and Closing Entries. A primary question in setting up adjusting and closing entries has to do with the degree to which the kind of classification and analysis which it may be desirable to display in the financial statements and supporting schedules should be reflected in journal and ledger procedure. How elaborately shall expenses and revenues be classified in formal accounts? To what extent shall functional and departmental groupings be emphasized in adjusting and closing? Shall the order and extent of adjusting and closing entries be such as to reflect each step and stage in the flow of values, and all relationships involved, as implied in the judgments and analyses employed in ascertaining the valuation and accrual data? The answers to such questions, as in the case of all questions of account classification, depend primarily upon the nature and size of the concern, the form of organization employed, and the consequent peculiar needs of owners and managers. As far as adjusting and closing operations are concerned, the procedure will be largely dictated by the extent to which costs as incurred and revenues as originally booked are classified and subdivided. The use in these operations of large numbers of additional accounts, not required through the period, is unnecessary and should be avoided. On the other hand, it is unwise to restrict the number of temporary accounts employed to a point which results in the obscuring of the crucial periodic processes. Overelaboration is on the whole a less serious mistake than extensive use of mixed accounts and other means of condensation.

It is often said in accounting circles that the extent of ledger classification and procedure, particularly with respect to adjusting and closing, is not a matter of much importance provided the statements and reports themselves are well prepared. No doubt this is true, but it should be remembered that sound statement construction can scarcely be built upon illogical and inadequate compilations of underlying data, and that systematic and complete procedure all along the line, including periodic operations, can be expected to foster effective work in the final and most significant task, the preparation and issue of the reports to owners, managers, and other interested parties.

Defining Accounts in Adjusting and Closing. It was pointed out in Chapter VI that although the distinctions between a current cost as

incurred, a current cost chargeable to some type of inventory such as work in process, and the amount of such cost, if any, assignable to the revenues of the period are clear in principle, a particular operating account throughout most of its history may represent an undistributed combination of the three phases of cost, and hence not be easily defined either as an asset account or as an expense account. At the close of the period, however, in connection with the preparation of adjusting and closing entries, it is necessary to reach a decision as to the function to be performed by each account appearing in the trial balance, as such decision is essential to the selection of the additional temporary accounts required and the form of entries to be adopted.

The insurance account in the trial balance shown on page 361, for example, may be viewed as an asset account representing unexpired premiums, in which case it will be necessary to remove from the account any amount of expired premiums involved, or it may be permitted to serve as the expired insurance account, which will require the carrying of any element of prepayment found therein to another account with an appropriate label. Under either treatment the outcome is the same: (1) the unexpired insurance is isolated for statement purposes; (2) the amount expired is distinguished for inclusion in expenses (if deemed to be fully applicable to the revenues of the period) or for division between the amount assignable to inventory accounts and the portion chargeable to revenue.

A similar question of procedure arises in the case of the accounts with supplies, office wages and salaries, and other classes of operating charges shown in the trial balance referred to. See the illustrative problem in the following chapter. Any treatment applied should of course harmonize with the accounting methods in effect during the period and must make correct use of the adjustment data available.

Under some systems balances at the close of the period representing unexpired insurance, supplies, and other minor assets are set up in special accounts which are then allowed to remain inactive during the ensuing period, all further costs incurred being charged to related current operating accounts. The adjusting entries where this general plan is employed may take either of two forms: (1) a net debit or credit to the asset account and a complementary entry to the operating account to increase or decrease the asset to the new level; (2) a credit to the asset account and a debit to the related operating account for the opening balance followed by a debit to the asset

account and a credit to the operating account for the new balance. To illustrate, assume that the M Co. in its first period of operation charges all oil, gas, and other delivery supplies directly to delivery expense, and that at the end of the period an inventory is taken which shows supplies of this class on hand to the amount of $200. The following are the adjusting entries:

Delivery Supplies	$200	
Delivery Expense		$200

Assume further that during the following period such supplies are again charged as acquired to delivery costs and that the concluding inventory is $300. The adjusting entries may take the form of a net adjustment, as follows:

Delivery Supplies	$100	
Delivery Expense		$100

Or, if it is desired to reflect in the procedure the probable consumption of the initial inventory and the establishment of the new inventory in full out of current costs incurred, the adjusting entries may be as follows:

(1)		
Delivery Expense	$200	
Delivery Supplies		$200
To record using of supplies in beginning inventory		
(2)		
Delivery Supplies	300	
Delivery Expense		300
To adjust total charges to delivery expense account for supplies on hand		

Both procedures, obviously, have the same effects.

In some cases the important element of materials or merchandise is handled according to the procedure just indicated through the use of a merchandise inventory account to display periodic balances on hand and a current cost or "purchases" account to show amounts acquired during the period. See discussion in Chapter XXV.

The use of "mixed" accounts—accounts regularly employed to show two or more distinct elements—gives rise to balances in the trial balance which are difficult to interpret without a full knowledge of the component elements and the procedure employed throughout the period. This is especially the case where the day-to-day account-

ing is primarily on a cash basis. Suppose, for example, that the M Co. at the conclusion of its first period of operation set up a liability for accrued interest of $100, and that during the ensuing period all payments on account of interest, to the amount of $300, are charged to this liability account, no regular accrual of the current interest being recorded. Under these conditions, evidently, the trial balance at the close of the second period will show an interest liability account with a debit balance of $200. If at this point the amount of accrued interest is $150, the adjusting entries, assuming that it desired to continue to use the original account to show the periodic liability, are as follows:

Interest Charges	$350	
Interest Accrued Payable		$350

This entry charges income with the full amount of interest accrued during the period (the amount paid, $300, less the amount owed at the beginning of the period, $100, plus the accrued liability at the end of the period, $150).

Questions

1. What is meant by the "period" in accounting? What phase of accounting work is peculiarly periodic?

2. List the principal steps or stages which comprise the cycle of accounting operations.

3. Discuss the relation of the accountant to the process of valuation.

4. What are the main functions of the trial balance? Contrast trial balance and position statement or "balance sheet."

5. Discuss the importance of accuracy in accounting and indicate some of the means by which errors may be located. Illustrate several kinds of errors which are not disclosed by "proving" the ledger.

6. What, in general, are the two main valuation problems which must be considered at the close of each period?

7. What is meant by "adjusting entries"? List the principal types and illustrate each.

8. Define and illustrate "closing entries." Is the distinction between adjusting and closing entries hard and fast? Explain.

9. What is meant by "balancing entries"? Why is it not necessary to pass such entries through the journal?

10. "Shall the order and extent of adjusting and closing entries be such as to reflect each step and stage in the flow of values, and all relationships involved?"

11. Discuss the problem of defining accounts in the process of adjusting and closing.

XIX

PERIODIC PROCEDURE ILLUSTRATED

Supplementary Data. The outline of adjusting and closing entries in the preceding chapter is here applied to a comprehensive example. Assume in the case of the A. B. Smith Co. that the trial balance (on page 361) is taken at the end of an accounting period of one year, and that the process of valuation, accrual, analysis, and verification results in the following supplementary data.

(1) The audit and count of cash in office shows a shortage of $1; under the procedure in effect the Company assumes the burden of this shortage.

(2) Bank statement for December, 1949, shows service charges deducted, and not yet recorded in Company accounts, of $5; outstanding checks, recorded in Company accounts but not paid by bank at close of business December 31, $800.

(3) Interest coupons on bonds owned amounting to $50 are collectible January 1, 1950.

(4) Credit balances of particular accounts in customers' ledger total $200.

(5) It is estimated that the allowance for bad debts should be increased by 1% of credit sales for year ($60,000); it is also decided that specific accounts of customers totaling $500 should be written off as worthless.

(6) Interest is accrued on notes receivable to December 31 of $20; all notes receivable are considered to be collectible.

(7) Merchandise inventory on December 31, 1949, priced at net invoice cost, and including a proper estimate of transportation charges and other applicable costs, is $14,500.

(8) On January 1, 1949, store, office, and delivery supplies were on hand in the amounts of $225, $75, and $200, respectively; during 1949 all supplies purchased have been charged to the appropriate "all other" accounts; inventories of store, office, and delivery supplies at the close of business December 31, 1949, are $175, $100, and $125, respectively.

(9) Examination of insurance register and other data shows that the amount of insurance prepaid or unexpired on December 31, 1949, is $400.

(10) Annual depreciation rates applicable to cost are 6% for store equipment, 8% for office equipment, and 20% for delivery equipment. A typewriter was purchased on July 1 at a cost of $100, and on the same date an old typewriter—with a

gross book value on Jan. 1, 1949, of \$75 and a net book value on the same date of \$5—was sold for \$10, cash. The retirement of the old typewriter was recorded by a debit to cash of \$10, a debit to allowance for depreciation of \$65, and a credit to office equipment of \$75, and no correcting entries have yet been made.

(11) A bill for auditing services rendered in the amount of \$400 was received from White & White on December 31, 1949, and has not yet been recorded.

(12) Services of employees have been received which have not yet been recorded, as follows: store, \$200; office, \$100; delivery, \$50; administrative, \$250. The total amount of taxes on employees applicable to these accruals which must be withheld and remitted by the employer is \$65.

(13) On January 1, 1950, interest on notes is payable in the amount of \$200 and principal is payable in the amount of \$2,500.

(14) Contract with owner of building calls for rent of \$2,400 per year payable monthly in advance.

(15) Taxes accrued and not yet recorded, including estimated income taxes applicable to the year 1949, total \$3,000.

(16) On December 31, 1949, the board of directors declared dividends of \$2,500, payable January 10, 1950, to stock of record December 31, 1949. This action has not yet been recorded.

Adjusting Entries. The adjusting entries, in view of these data, are as follows:

(1)		
All Other General and Administration Costs	\$ 1	
Cash		\$ 1
To recognize cash shortage as an incidental cost		
(2)		
All Other General and Administration Costs	5	
National City Bank—Commercial Account . . .		5
To recognize service costs shown by bank statement		
(3)		
Interest Accrued Receivable	50	
Interest Revenue		50
To accrue interest on bonds		
(4)		
Accounts Receivable	200	
Advances by Customers		200
To set up credit balances in customers' ledger as a liability		
(5)		
Sales—Bad Debts Adjustment	600	
Allowance for Bad Debts		600
To deduct from revenues the estimated applicable amount uncollectible		
Allowance for Bad Debts	500	
Accounts Receivable (also specific accounts) . . .		500
To write off bad accounts		
(6)		
Interest Accrued Receivable	20	
Interest Revenue		20
To accrue interest on notes receivable		

(7)

Merchandise Cost of Sales	30,500	
Merchandise		30,500
To recognize merchandise cost applicable to current business		

(8)

All Other Store Costs	50	
Supplies		50
To adjust inventory of store supplies		
Supplies	25	
All Other Office Costs		25
To adjust inventory of office supplies		
All Other Delivery Costs	75	
Supplies		75
To adjust inventory of delivery supplies		

(9)

All Other General and Administration Costs	300	
Insurance		300
To adjust unexpired insurance account		

(10)

All Other Store Costs	360	
Equipment—Allowance for Depreciation		360
To accrue depreciation on store equipment		
All Other Office Costs	167	
Equipment—Allowance for Depreciation		167
To accrue depreciation on office equipment		
All Other Delivery Costs	400	
Equipment—Allowance for Depreciation		400
To accrue depreciation on delivery equipment		
Equipment—Allowance for Depreciation	8	
Income on Retirements		8
To record income on sale of equipment		

(11)

All Other General and Administration Costs	400	
Accounts Payable (also White & White)		400
To book bill of White & White for audit cost		

(12)

Store Wages and Salaries	200	
Office Wages and Salaries	100	
Delivery Wages	50	
Administration Salaries	250	
Payroll		600
To accrue service costs and payroll liability to December 31		
Payroll	65	
Taxes Payable		65
To charge gross payroll with taxes to be withheld		

(13)

Interest Charges	200	
Interest Accrued Payable		200
To accrue interest on notes payable		

(15)

Tax Costs	3,000	
Taxes Payable		3,000
To accrue taxes applicable to 1949 and not previously recognized		

(16)

Income	2,500	
Dividends Payable		2,500
To record dividend declaration		

General Comments on Data and Entries. A few general comments on the foregoing supplementary data and adjusting entries are next in order. The data given, in the first place, are designed to cover a fairly wide range of adjustments and hence need not be thought of as fully typical of the affairs of the ordinary small concern. The statement of supplementary information, in the second place, while complete and adequate for the purpose, does not include the calculations, schedules, and other details which would be involved. Third, in a few cases data are given which are of interest and should be available but which are not essential to the preparation of the adjusting entries. An example is the amount of principal due on note obligations on January 1, 1950. Fourth, the illustration is designed to represent a number of types of procedures, rather than any one ideal system. For example, both merchandise inventory and merchandise purchases are included in a single account, whereas the purchases of supplies are charged to current operating accounts and a special account is employed to register periodic inventories. Likewise the degree of elaboration in classification of accounts and in other respects is not the same at all points. Fifth, in general new accounts are introduced in the adjusting entries only in those cases where the accounts appearing in the trial balance are definitely inadequate to meet the needs involved. Sixth, very brief supporting details are displayed in the adjusting entries as written up, but it should be remembered that the adjusting entries are an important part of the accounting process and that full explanations and complete underlying data must be available in convenient form. Seventh, while the two-column journal form is in general the suitable medium for recording adjusting entries, the cash and bank adjustments given might readily be recorded through the cash records, and the booking of the auditing bill and payroll accruals through some form of cost journal.

It should be noted that the numbers used to identify adjusting

entries correspond to the numbers employed in presenting the underlying data.

Discussion of Specific Adjustments. Comments on the specific adjustments made are also required, and the identifying numbers will be used for convenience.

(1) Amount of cash shortage is here treated as a minor item of general expense. Use of a special account might be desirable in some cases.

(2) Bank service costs are likewise included in the "general" account.

(3) As in other examples, it is assumed for convenience that the full amount of interest collectible at the beginning of the following period is accrued at the close of business on the last day of the current period. The fact that no item of interest accrued receivable appears in the trial balance indicates that there has as yet been no recognition of interest accrued receivable on December 31.

(4) The entries made here follow the method of treatment outlined in Chapter IX.

(5) The end of the accounting period is a convenient time to accrue the estimated amount of charges to customers made during the period that are uncollectible. The writing off of specific accounts should be taken care of from time to time throughout the year, including the end of the period.

(6) The amount accrued must be precisely calculated in terms of the conditions attaching to each note. From the data given none of these underlying details can be determined. The size of the credit to interest revenue shown in the trial balance suggests that there has been a considerable holding of interest-bearing receivables (including bonds) throughout 1949.

(7) Where the merchandise inventory is assumed to include any operating costs originally recorded in other accounts, the ideal form of adjustment consists of a transfer of the total of such costs applicable to merchandise for the period to merchandise account followed by the recognition of merchandise cost of sales, as this procedure shows all assignable costs chargeable to current sales in the form of the cost of merchandise rather than under other heads.

(8) The supplies account is handled here as an inventory account, with the special feature of being related to a number of operating accounts. It is evident that the adjustment on December 31 could be accomplished by a net credit to supplies of $100 in lieu of the two credits and one debit shown above. The necessary adjustment might also be made by distributing the opening balance among the three operating accounts affected, followed by credits to these same accounts and a debit to supplies for the amount of the inventory on December 31. If all supplies had been charged to supplies account as purchased, the adjustment would take the form of a distribution of the amount consumed to the operating accounts affected. It should be noted that if a single supplies account is used to cover three classes of operating charges it is necessary to maintain subordinate records to furnish a basis for the periodic distribution.

(9) In the case of insurance it appears that all insurance premiums are charged directly to the insurance account and the amount expired is periodically credited to insurance and charged to appropriate cost accounts. The entries made in this case assume that all of the expired amount is chargeable to expense for the period.

This is a common assumption in business practice, although not always entirely reasonable. Use of special account, insurance expense, might be desirable in some cases. Another possibility ignored here is the departmentalizing of insurance cost.

(10) If the data given are complete there were no additions or retirements in the case of store equipment and delivery equipment, and hence the depreciation charges in these cases are \$360 (6% of \$6,000) and \$400 (20% of \$2,000). In the case of office equipment the debit figure of \$2,100 shown in the trial balance is the resultant of an opening balance on January 1, 1949, and a debit of \$100 and a credit of \$75 made on July 1; hence the opening balance must have been \$2,075. Depreciation for 1949 on office equipment then amounts to \$167—8% of \$2,000 plus 4% of \$75 plus 4% of \$100. If desired the depreciation on the retired unit for the period of use might be separately accrued. The depreciation accrued on the retired item on January 1, 1949, was \$70 and the accrual for the period of use from January 1 to date of retirement is \$3—a total of \$73. It follows that the net book value at date of retirement was only \$2 and since the unit was disposed of for \$10 an item of book income from retirement was realized of \$8. Correcting entries are necessary to close out the balance of the accrued depreciation on the retired unit (\$73 less the \$65 already recorded) from the allowance for depreciation, and recognize the corresponding item of income.

In accruing depreciation and making adjustments where additions and retirements have occurred it is necessary to see to it that depreciation be recognized at the prescribed rates on all the assets in use throughout the period of their use, that the full cost of assets retired be closed from the main asset accounts, and that the full amount of depreciation accrued to date of retirement be closed from the contra allowance accounts. Reversing incomplete or inaccurate entries previously recorded may be a convenient first step in some cases.

Use of a "depreciation cost" account, to receive the charge for depreciation for the year would be a possibility. Absorbing depreciation in departmental accounts is particularly questionable if it means that the amount of depreciation included in expenses cannot be determined from an examination of the income statement.

(11) This adjustment is simply a "last-minute" recognition of a cost and liability incurred. The inclusion of the liability under "accounts payable" assumes the use of a broad controlling account such as is common under the voucher system. If the bill of White & White had not been received before the end of the period (or before the adjustments were completed) it would be necessary to accrue the cost of service already rendered by the auditor on an estimated basis. In this event the credit for the liability, not yet supported by a definite bill or statement, should be to a special accrued liability account, the amount being transferable to accounts payable when the statement is received and approved. Similar treatment should be accorded to the costs of utility service, advertising, and other special services.

(12) This example avoids details with respect to payroll deductions. In practice the liability for taxes withheld must be broken down in terms of the different governmental entities involved, and separation by types of tax is generally desirable. The taxes falling on the employer applicable to this accrual of labor costs must also be calculated and recognized. It is assumed here that such taxes are charged to tax costs rather than labor costs, and that all accrued taxes are included under (15).

(13) Since the trial balance shows a debit balance in interest charges of \$200 and the amount now accrued—and payable the next morning—is also \$200 it appears

that the notes are all of one issue with interest payable semiannually at an annual rate of 4%.

(14) The trial balance now shows a debit balance of $2,400 for rent; hence this item represents the actual cost of service received for the year and no year-end adjustment is required. This conclusion, it may be added, depends upon the assumption that the accounts were correctly adjusted at the end of the preceding period.

(15) All tax charges are lumped in this example. In practice some classification is desirable. The tax liability may also require classification, as noted above.

(16) A special account, dividend charges, might be used, which would then be closed into income. Dividends declared are often charged directly to retained earnings, but the use of the income account provides for a definite comparsion of net income and distributions to capital contributors in the form of interest and dividends.

Closing Entries. The closing entries for the A. B. Smith Co. on December 31, 1949, based on the trial balance in the preceding chapters and the adjusting entries made above, are as follows:

(a)		
Expense and Revenue	$30,500	
Merchandise Cost of Sales		$30,500
(b)		
Expense and Revenue	7,200	
Store Wages and Salaries		7,200
(c)		
Expense and Revenue	2,410	
All Other Store Costs		2,410
(d)		
Expense and Revenue	3,100	
Office Wages and Salaries		3,100
(e)		
Expense and Revenue	1,142	
All Other Office Costs		1,142
(f)		
Expense and Revenue	2,050	
Delivery Wages		2,050
(g)		
Expense and Revenue	2,475	
All Other Delivery Costs		2,475
(h)		
Expense and Revenue	4,250	
Administration Salaries		4,250
(i)		
Expense and Revenue	2,606	
All Other General and Administration Costs		2,606

(j)

Expense and Revenue	2,000	
Advertising and Sales Promotion		2,000

(k)

Expense and Revenue	2,400	
Rent of Building		2,400

(l)

Expense and Revenue	6,000	
Tax Costs		6,000

(m)

Sales	600	
Sales—Bad Debts Adjustment		600

(n)

Sales	69,400	
Expense and Revenue		69,400

(o)

Interest Revenue	220	
Expense and Revenue		220

(p)

Income on Retirements	8	
Expense and Revenue		8

(q)

Expense and Revenue	3,495	
Income		3,495

(r)

Income	400	
Interest Charges		400

(s)

Income	595	
Retained Earnings		595

In these entries letters are used instead of numbers to emphasize the distinction between adjustments and closings. No details or comments are added to the entries, as in each case the purpose of the procedure–to close a particular income-statement item in the process of summarizing and reducing to lowest terms–is clear. Interest revenue and income on retirements are transferred to expense and revenue, in accordance with the views outlined in earlier chapters. Interest charges are closed to income rather than to expense and revenue, to emphasize the special character of such charges as an element of return on funds employed in the enterprise.

In general all adjusting entries should be posted before closing entries are prepared, as the process of adjustment is an essential step in the disclosure of the data of expenses, revenues, and net income.

Ledger Accounts. The accounts of the A. B. Smith Co., ruled and with balances brought down as of January 1, 1950, are shown below in skeleton form. Each account begins with the trial balance figure, no attempt being made to display the underlying entries posted during the period.

CASH

12/31/49		√	500	12/31/49		CJ(1)	1
				12/31/49	Balance	√	499
			500				500
1/ 1/50	Balance	√	499				

NATIONAL CITY BANK—COMMERCIAL ACCOUNT

12/31/49		√	10,000	12/31/49		J(2)	5
				12/31/49	Balance	√	9,995
			10,000				10,000
1/ 1/50	Balance	√	9,995				

U. S. BONDS

12/31/49		√	5,000	12/31/49	Balance	√	5,000
1/ 1/50	Balance	√	5,000				

ACCOUNTS RECEIVABLE

12/31/49		√	13,900	12/31/49		J(5)	500
12/31/49		J(4)	200	12/31/49	Balance	√	13,600
			14,100				14,100
1/ 1/50	Balance	√	13,600				

ALLOWANCE FOR BAD DEBTS

12/31/49		J(5)	500	12/31/49		√	200
12/31/49	Balance	√	300	12/31/49		J(5)	600
			800				800
				1/ 1/50	Balance	√	300

INTEREST ACCRUED RECEIVABLE

12/31/49		J(3)	50	12/31/49	Balance	√	70
12/31/49		J(6)	20				
			70				70
1/ 1/50	Balance	√	70				

NOTES RECEIVABLE

12/31/49		√	5,000	12/31/49	Balance	√	5,000
1/ 1/50	Balance	√	5,000				

MERCHANDISE

12/31/49		√	45,000	12/31/49		J(7)	30,500
				12/31/49	Balance	√	14,500
			45,000				45,000
1/ 1/50	Balance	√	14,500				

SUPPLIES

12/31/49		√	500	12/31/49		J(8)	50
12/31/49		J(8)	25	12/31/49		J(8)	75
				12/31/49	Balance	√	400
			525				525
1/ 1/50	Balance	√	400				

INSURANCE

12/31/49		√	700	12/31/49		J(9)	300
				12/31/49	Balance	√	400
			700				700
1/ 1/50	Balance	√	400				

STORE EQUIPMENT—COST

12/31/49		√	6,000	12/31/49	Balance	√	6,000
1/ 1/50	Balance	√	6,000				

OFFICE EQUIPMENT—COST

12/31/49		√	2,100	12/31/49	Balance	√	2,100
1/ 1/50	Balance	√	2,100				

DELIVERY EQUIPMENT—COST

12/31/49		√	2,000	12/31/49	Balance	√	2,000
1/ 1/50	Balance	√	2,000				

EQUIPMENT—ALLOWANCE FOR DEPRECIATION

12/31/49		J(10)	8	12/31/49		√	2,000
12/31/49	Balance	√	2,919	12/31/49		J(10)	360
				12/31/49		J(10)	167
				12/31/49		J(10)	400
			2,927				2,927
				1/ 1/50	Balance	√	2,919

ACCOUNTS PAYABLE

12/31/49	Balance	√	7,100	12/31/49		√	6,700
				12/31/49		VR(11)	400
			7,100				7,100
				1/ 1/50	Balance	√	7,100

NOTES PAYABLE

12/31/49	Balance	√	10,000	12/31/49		√	10,000
				1/ 1/50	Balance	√	10,000

INTEREST ACCRUED PAYABLE

12/31/49	Balance	√	200	12/31/49		J(13)	200
				1/ 1/50	Balance	√	200

PAYROLL

12/31/49		J(12)	65	12/31/49		√	300
12/31/49	Balance	√	835	12/31/49		J(12)	600
			900				900
				1/ 1/50	Balance	√	835

TAXES PAYABLE

12/31/49	Balance	√	3,565	12/31/49		√	500
				12/31/49		J(12)	65
				12/31/49		J(15)	3,000
			3,565				3,565
				1/ 1/50	Balance	√	3,565

DIVIDENDS PAYABLE

12/31/49	Balance	√	2,500	12/31/49		J(16)	2,500
				1/ 1/50	Balance	√	2,500

ADVANCES BY CUSTOMERS

12/31/49	Balance	√	200	12/31/49		J(4)	200
				1/ 1/50	Balance	√	200

CAPITAL STOCK

12/31/49	Balance	√	30,000	12/31/49		√	30,000
				1/ 1/50	Balance	√	30,000

RETAINED EARNINGS

12/31/49	Balance	√	1,945	12/31/49		√	1,350
				12/31/49		J(s)	595
			1,945				1,945
				1/ 1/50	Balance	√	1,945

MERCHANDISE COST OF SALES

12/31/49		J(7)	30,500	12/31/49		J(a)	30,500

STORE WAGES AND SALARIES

12/31/49		✓	7,000	12/31/49	J(b)	7,200
12/31/49		J(12)	200			
			7,200			7,200

ALL OTHER STORE COSTS

12/31/49		✓	2,000	12/31/49	J(c)	2,410
12/31/49		J(8)	50			
12/31/49		J(10)	360			
			2,410			2,410

OFFICE WAGES AND SALARIES

12/31/49		✓	3,000	12/31/49	J(d)	3,100
12/31/49		J(12)	100			
			3,100			3,100

ALL OTHER OFFICE COSTS

12/31/49		✓	1,000	12/31/49	J(8)	25
12/31/49		J(10)	167	12/31/49	J(e)	1,142
			1,167			1,167

DELIVERY WAGES

12/31/49		✓	2,000	12/31/49	J(f)	2,050
12/31/49		J(12)	50			
			2,050			2,050

ALL OTHER DELIVERY COSTS

12/31/49		✓	2,000	12/31/49	J(g)	2,475
12/31/49		J(8)	75			
12/31/49		J(10)	400			
			2,475			2,475

ADMINISTRATION SALARIES

12/31/49		✓	4,000	12/31/49	J(h)	4,250
12/31/49		J(12)	250			
			4,250			4,250

ALL OTHER GENERAL AND ADMINISTRATION COSTS

12/31/49		✓	1,900	12/31/49	J(i)	2,606
12/31/49		CJ(1)	1			
12/31/49		J(2)	5			
12/31/49		J(9)	300			
12/31/49		VR(10)	400			
			2,606			2,606

ADVERTISING AND SALES PROMOTION

12/31/49		√	2,000	12/31/49		J(j)	2,000

RENT OF BUILDING

12/31/49		√	2,400	12/31/49		J(k)	2,400

TAX COSTS

12/31/49		√	3,000	12/31/49		J(l)	6,000
12/31/49		J(15)	3,000				
			6,000				6,000

SALES

12/31/49		J(m)	600	12/31/49		√	70,000
12/31/49		J(n)	69,400				
			70,000				70,000

SALES—BAD DEBTS ADJUSTMENT

12/31/49		J(5)	600	12/31/49		J(m)	600

INTEREST REVENUE

12/31/49		J(o)	220	12/31/49		√	150
				12/31/49		J(3)	50
				12/31/49		J(6)	20
			220				220

INCOME ON RETIREMENTS

12/31/49		J(p)	8	12/31/49		J(10)	8

EXPENSE AND REVENUE

12/31/49		J(a)	30,500	12/31/49		J(n)	69,400
12/31/49		J(b)	7,200	12/31/49		J(o)	220
12/31/49		J(c)	2,410	12/31/49		J(p)	8
12/31/49		J(d)	3,100				
12/31/49		J(e)	1,142				
12/31/49		J(f)	2,050				
12/31/49		J(g)	2,475				
12/31/49		J(h)	4,250				
12/31/49		J(i)	2,606				
12/31/49		J(j)	2,000				
12/31/49		J(k)	2,400				
12/31/49		J(l)	6,000				
12/31/49		J(q)	3,495				
			69,628				69,628

INTEREST CHARGES

12/31/49		√	200	12/31/49		J(r)	400
12/31/49		J(13)	200				
			400				400

INCOME

12/31/49		J(16)	2,500	12/31/49		J(q)	3,495
12/31/49		J(r)	400				
12/31/49		J(s)	595				
			3,495				3,495

The procedure followed here in balancing and ruling accounts conforms to that described in Chapter VII. Where only a single figure appears on each side no final footings are shown. Trial balance figures and final balances are indicated in the folio columns by check marks (√). The term "balance" is used in all cases to denote the asset and equity elements as they stand on January 1, 1950. The numbers and letters employed in setting up the adjusting and closing entries are used in lieu of journal folios. As mentioned above, other media than the simple journal might be used in a few cases, and this fact is indicated by the folio references shown. In general the simple journal is the most satisfactory device for recording periodic adjustments.

Final Ledger Balances. A final check of adjusting and closing operations from the standpoint of the equation of debits and credits is afforded by a compilation of balances, as shown on page 393. Preferably this test is made before the accounts are formally ruled and redated. As noted earlier there is some objection to the use of the term "trial balance" as a label for such a compilation, but in practice the caption "post-closing trial balance" is usually employed.

Income Statement. An income statement for the A. B. Smith Co. for the period ending December 31, 1949, compiled directly from the ledger accounts representing income-statement data, including retained earnings, appears on page 394. In this statement the adjustment for bad debts is treated as a direct offset to revenue rather than as an expense. This is the preferred interpretation. The small items of interest and income on retirements are combined in a total of "other income." Such a treatment is especially needed where there are quite a number of incidental revenue items. The classifi-

A. B. SMITH COMPANY
Final Ledger Balances
At the Close of Business, December 31, 1949

F	Accounts	Dr.	Cr.
1	Cash	$ 499	
30	National City Bank—Commercial Account	9,995	
35	U. S. Bonds	5,000	
40	Accounts Receivable	13,600	
41	Allowance for Bad Debts		$ 300
42	Interest Accrued Receivable	70	
45	Notes Receivable	5,000	
50	Merchandise	14,500	
55	Supplies	400	
57	Insurance	400	
85	Store Equipment—Cost	6,000	
86	Office Equipment—Cost	2,100	
88	Delivery Equipment—Cost	2,000	
89	Equipment—Allowance for Depreciation		2,919
120	Accounts Payable		7,100
150	Notes Payable		10,000
155	Interest Accrued Payable		200
160	Payroll		835
165	Taxes Payable		3,565
170	Dividends Payable		2,500
175	Advances by Customers		200
180	Capital Stock		30,000
190	Retained Earnings		1,945
		$59,564	$59,564

cation of expenses follows the layout of ledger accounts given. It must be borne in mind that this is an artificial case and that the "all other" groupings are included to indicate the possibility of further classification of costs. The cost headings used are somewhat suggestive of functional and departmental classification, but no attempt has been made in the illustration to go very far in this direction. No allocation of rent cost or of taxes is indicated. A footnote is added for the purpose of disclosing the total depreciation cost included in expenses. As was pointed out in an earlier chapter, there has been some tendency in recent years, particularly in reports to stockholders, to stress simple or primary classification as opposed to departmental allocations.

Position Statement. The position statement may be readily compiled from the final ledger balances. See page 395. In this example current assets and current liabilities are listed in the same detail as these elements are shown in the ledger, and with the exception of "cash on hand" the descriptions correspond to the account titles.

A. B. Smith Company

Income Statement

Year Ended December 31, 1949

Sales	$70,000		
Bad Debts Adjustment	600	$69,400	
Other Income (interest, $220, and income on retirements, $8)		228	$69,628
Expenses and Taxes:			
Expenses—			
Merchandise Cost of Sales	$30,500		
Store Wages and Salaries	7,200		
All Other Store Costs*	2,410		
Office Wages and Salaries	3,100		
All Other Office Costs*	1,142		
Delivery Wages	2,050		
All Other Delivery Costs*	2,475		
Administration Salaries	4,250		
All Other General and Administration Costs	2,606		
Advertising and Sales Promotion	2,000		
Rent of Building	2,400	$60,133	
Tax Costs		6,000	66,133
Net Income			$ 3,495
Interest Charges			400
Earnings of Stockholders			$ 3,095
Dividends			2,500
Earnings Retained in Business			$ 595
Retained Earnings, January 1, 1949			1,350
Retained Earnings, December 31, 1949 (see position statement)			$ 1,945

* Depreciation charges included in these accounts total $927.

In practice various arrangements and combinations may be desirable, and statement captions need not follow account titles precisely. In the case of fixed assets the costs of the three types of equipment are totaled. As a rule a fairly condensed presentation is desirable in this area. The use of the single allowance for depreciation in the illustration is not intended to suggest that classification of the total accrued in terms of main groups of depreciable assets is undesirable. The asset side in this case is simplified by the fact that there are no noncurrent investments or intangibles to be dealt with. Inclusion of the definite statement that there are no long-term liabilities illustrates a practice that is sometimes found in published statements. Footnotes and other explanatory materials are often needed to clarify the nature of particular items of the position statement. Among collateral data that may well be given on the face of the statement or

in accompanying notes are bases of valuing assets, rates of interest involved, number of shares of stock, and so on.

A. B. SMITH COMPANY
Position Statement
December 31, 1949

Assets

Current:			
Cash on Hand		$ 499	
National City Bank—Commercial Account		9,995	
U. S. Bonds		5,000	
Accounts Receivable	$13,600		
Less Allowance for Bad Debts	300	13,300	
Interest Accrued Receivable		70	
Notes Receivable		5,000	
Merchandise		14,500	
Supplies		400	
Insurance		400	$49,164
Fixed:			
Office, Store, and Delivery Equipment—Cost	$10,100		
Less Allowance for Depreciation	2,919		7,181
			$56,345

Equities

Current Liabilities:		
Accounts Payable	$ 7,100	
Notes Payable	10,000	
Interest Accrued Payable	200	
Payroll	835	
Taxes Payable	3,565	
Dividends Payable	2,500	
Advances by Customers	200	$24,400
Long-Term Liabilities:		none
Stockholders' Equity:		
Capital Stock	$30,000	
Retained Earnings	1,945	$31,945
		$56,345

XX

WORK SHEET AND STATEMENTS

Function of General Work Sheet. Particularly in large concerns, with many accounts, the journals and ledgers and other formal records do not constitute in themselves a fully satisfactory technical basis for the preparation of periodic statements. Until the process of adjustment has been carried to its conclusion, of course, compilation of position-statement data from the ledger is impossible. And when the work of adjusting, closing, and balancing has been completed—when, in other words, the accounts have been reduced to their lowest terms—the figures required in the construction of the income report are somewhat obscured. Further, the construction of statements by means of direct reference to a large number of entries and balances appearing on many pages or sheets in, possibly, a number of distinct books and records, involves obvious clerical difficulties and requires the exercise of unusual care if errors are to be avoided. There is needed some form of recapitulating and classificatory device that will assist in bridging the gap between the regular accounting records and the final statements.

The comprehensive work sheet is designed primarily to meet this need. This accounting instrument consists essentially of a series of parallel vertical columns in which the data of the trial balance, the adjustments, and the principal periodic reports are compactly assembled and made available for statement writing. The number of money columns employed may range all the way from six to eighteen (or even more), depending upon the type of situation and the particular methods of procedure adopted. Where columns are provided for the purpose the work sheet includes a preliminary draft and proof of the required adjusting entries and thus has the additional function of facilitating the periodic journal and ledger work.

The work sheet is not a financial statement or exhibit to be placed in the hands of managers, owners, or others interested in the operations and financial position of the enterprise. It is a purely technical device, prepared by the accountant for his own convenience and not as an end in itself.

Forms of Work Sheets. In its simplest form the work sheet is a six-column tabulation, consisting of the general trial balance, debit and credit income-statement columns, and debit and credit position-statement columns, as indicated by the following:

NATIONAL RADIO COMPANY

Work Sheet, Period Ended December 31, 1949

Ref.	Account Titles	Trial Balance		Income Statement		Position Statement	
		Dr.	Cr.	Dr.	Cr.	Dr	Cr.
1	Cash	$ 100	$	$	$	$ 100	$
30	Commerce Bank	4,500		5		4.495	
40	Accounts Receivable	10,000				10,000	
41	Allowance for Bad Debts		250	500			750
243	Office Salaries	1,000		1,100			100
300	Sales		25,000		25,000		
301	Sales Discounts	400		400			
325	Interest Revenue		200		210	10	
				$27,000	$28,500	$81,900	$80,400
	Net Earnings			1,500			1,500
		$111,600	$111,600	$28,500	$28,500	$81,900	$81,900

A space also may be provided for listing the data of inventories and accruals. In preparing this type of work sheet the first step is the compilation of the trial-balance columns. The sheet is then completed by distributing the net amounts of the trial balance by accounts, including recognition of the effect of all adjusting data, among the statement columns. The adjustments are made directly, without display of adjusting entries, and in general all data for the statements associated with a particular account of the trial balance are recorded on a single line, without the use of additional headings. This lack of emphasis on the process of adjustment—with the accom-

Ref.	Account Titles	Ledger Balances 1/1/49		Abstract of Postings 1/1–12/31/49	
		Dr.	Cr.	Dr.	Cr.

panying difficulty of avoiding errors—is the principal objection to the use of this type of sheet.

A standard form of work sheet is that which includes columns for adjusting entries and adjusted trial balance, in addition to the six columns of the simple form. See complete illustration later in this chapter. It is this type of work sheet, with its emphasis upon adjusting entries, which is most widely employed by accountants and which is also the most satisfactory for purposes of the student.

The ten-column sheet is sometimes expanded through subdivision of income-statement and position-statement columns. If it is desired, for example, to classify revenues and deductions in the work sheet by main departments it is necessary to employ as many pairs of income-statement columns as there are departments to be recognized. In some circumstances additional columns may be provided to permit the segregation of manufacturing costs or other primary groups of charges. With respect to the position-statement section the most common elaboration is the use of two pairs of columns, one for current assets and liabilities and the other for fixed and capital items.

Another extension of the general work sheet, often employed by the auditor, is the addition of columns to permit a showing of ledger balances at the beginning of the period and an abstract of transactions recorded during the period. The nature of this type of sheet is indicated by the form on this and the following page.

Many minor variations in form are possible. Some accountants do not deem it necessary to include columns for the adjusted trial balance. Another variation involves the separation of the trial balance into two horizontal sections, one showing position-statement accounts and the other income-statement accounts, which makes it possible to

Trial Balance 12/31/49		Adjusting Entries		Adjusted Trial Balance		Income Statement		Position Statement	
Dr.	Cr.	Dr.	Cr.	Dr.	Cr.	Dr.	Cr.	Dr.	Cr.

restrict the space for statement data to a single pair of columns, similarly divided. Still further restriction of columnar requirements may be secured through the use of a single column, divided horizontally into debit and credit sections, in lieu of one or more pairs of columns in the standard form. Such devices are useful particularly in situations where it is desired to compile a continuous work sheet covering several successive periods.

Illustrative Work Sheet—Adjustment Data. The nature of the work sheet and the procedure involved in its preparation can best be explained by an example. On December 31, 1949, the ledger of the Barron Drug Co., before adjusting and closing entries, stood as shown by the trial balance columns of the completed work sheet appearing on pages 402–403. For convenience in discussion a series of consecutive numbers, in lieu of any scheme of ledger folios or account numbers, is used to designate account titles. The adjusting data at this time (following the reference numbers attached to the titles) are:

(1) The balance of cash receipts represents checks received from customers and not yet deposited.

(2) Outstanding checks not yet paid by bank, and all drawn in favor of trade creditors, total $500. The bank statement for December shows a charge for $100 representing a check drawn by L. O. Reed, a customer, which was included in a December deposit and has proved to be uncollectible.

(3) Audit of office cash shows amount on hand to be $365; expense vouchers of cashier, not yet reflected on general books, total $135, of which amount $60 is chargeable to store operation and $75 to administration.

(4) (5) For interest accrued receivable on bonds and notes see (37) below.

(6) (7) The current allowance for uncollectibles is set at 2% of the credit

sales for the period, $60,000 (store sales, $50,000, and prescriptions, $10,000). A schedule of bad accounts is prepared and written off amounting to $1,000. Audit of the customers' ledger shows the controlling account to be in harmony therewith except in the case of one account, that of R. L. Ryan, in which collection of $20 was correctly posted to the controlling account but was posted to Ryan's account as $200.

(8) Accrued rents not booked, $50; all rent accounts receivable are deemed to be collectible.

(9) Merchandise inventory on December 31, on a net cost basis, is $51,300; of this amount it is decided to write off $700 to cover estimated obsolescence and shop-wear. The merchandise cost of sales for the period is applicable as follows: store sales, $90,000; prescriptions, $19,000; fountain sales, $31,500.

(10) Inventory of supplies on December 31 is $500; amount consumed is chargeable to store operation and administration costs on a 80–20 basis.

(11) Examination of insurance register shows that premiums applicable to later periods total $400; expired insurance is considered an administration cost.

(12) The Company's investment in Troy Building and Loan Association, including interest accumulations, totaled $4,500 at the beginning of the period; the total accumulation to December 31 is $4,625. All of this stock has been used as collateral to secure Barron loan referred to under (22) below.

(13–20) Annual depreciation rates are: store equipment, 8%; fountain equipment, 12%; office equipment, 8%; motor cars, 24%. The entire amount of depreciation for the period is deemed to be applicable to current revenues.

(21) Subsidiary ledger is in harmony with controlling account and all audited invoices have been recorded.

(22) On July 1, 1949, R. O. Barron loaned the Company $15,000 in cash, the Company giving its 4% note for $15,000, due July 1, 1950, and secured by its stock in the Troy Building and Loan Association under a special agreement. The cash received was largely used to meet maturing bank loans.

(23) The Company rents a site and building from the J. B. Barron Estate, the lease calling for a payment of $400 per month. On January 1, 1949, rent was accrued payable for three months, and during 1949 no rent has been paid. Included in the "customers' accounts" of the Company are certain balances amounting to $1,600 which the corporation contends are valid claims against the Estate. At the close of business, December 31, 1949, an agreement is reached by which the Estate permits the said balances to be applied on the rentals due. The administrator gives the Company a written receipt for rent in the amount of $1,600 and the Company gives its receipt covering the full amount of its claims, and agrees to pay the balance of rent due on January 1, 1950. This settlement has not yet been recorded. The entire rent cost for the year is deemed to be applicable to current revenues.

(24) Dividend of $1 per share on the outstanding stock (1,000 shares) was declared at a meeting of the directors on December 15, payable January 15 to stock of record December 31. Another dividend of the same amount was declared on June 15, payable on July 15 to stock of record June 30. Both of these dividends have been charged directly to retained earnings.

(25) (26) Capital stock outstanding consists of 500 shares issued at par, $100; the stock ledger is in harmony with the controlling account. No adjustment of retained earnings is required at this point.

(27–31) No adjustments of these revenue accounts are required, other than the rent accrual indicated above. Rent revenues arise from subletting various sections of the building used by the Company. Miscellaneous revenues include stamp revenue, amusement machine receipts, etc.

(32) (33) These accounts control subsidiary accounts which show operating costs in some detail. Accrued payrolls amount to $500, chargeable as follows: store operation, $300; administration, $200. The totals of the charges shown, as adjusted, are considered to be chargeable to current revenues.

(34) Sales taxes are accrued and not yet booked amounting to $300.

(35) (36) These charges are applicable to current revenues; there are no adjustments.

(37) Interest is accrued receivable on bonds, $50, and on notes, $20.

(38) For basis of computing interest accrued payable see (22) above.

(51) (52) Estimated Federal income tax for the year is $1,000.

Explanation of Adjusting Entries. The adjusting entries based upon the foregoing data for the Barron Drug Co. are shown in work-sheet form in the illustrative sheet on pages 402–403. To facilitate reference the related debits and credits, in some cases widely separated because of the location of the titles of the accounts affected, are numbered in a consecutive series. (This series should not be confused with the reference numbers which accompany the account titles given.) Rearranged in ordinary journal form these entries constitute the adjusting entries suitable for posting to the ledger accounts. Proof of accuracy in handling adjustments, from the standpoint of columnar distribution, is found in the equation of footings for the third and fourth columns of the sheet. With respect to the treatment accorded the specific adjusting entries the following comments and explanations are in order. The reference numbers attached to the account titles of the trial balance are again used.

(1) Accountants usually make no adjusting entries covering checks which have not yet reached the bank on which drawn. That is, the amount of such checks is treated as a reduction in bank balance, as already booked.

(2) The uncollectible check drawn by Reed is charged back to his account on the assumption that the amount is still collectible. Only the entry to the controlling account is shown here, as the work sheet is confined to the general-ledger accounts.

(3) The procedure assumes that this is not the occasion for drawing the replenishing check. The distribution to the accounts of the two cost ledgers is not shown. Illustrative schedules are given later.

(6) (7) The treatment of bad accounts written off assumes that all of these accounts are applicable to the allowance provided, and that no special adjustment is required. Ideally the balance in the allowance should be no larger than a reasonable estimate of the potential bad debts in outstanding accounts. The error in Ryan's account must of course be corrected, but this requires no adjustment in the general ledger.

Barron Drug Company
Work Sheet—Year Ended December 31, 1949

Ref.	Account Titles	Trial Balance		Adjusting Entries		Adjusted Trial Balance		Income Statement		Position Statement	
		Dr.	Cr.	Dr.	Cr.	Dr.	Cr.	Dr.	Cr.	Dr.	Cr.
1	Cash	$ 200	$	$	$	$ 200	$	$	$	$ 200	$
2	National Bank of Troy	4,500			(1) 100	4,400				4,400	
3	Office Cash Fund	500			(2) 135	365				365	
4	Government Bonds	5,000				5,000				5,000	
5	Notes Receivable	3,000				3,000				3,000	
6	Customers' Accounts	25,000		(1) 100	(4) 1,000 (12) 1,600	22,500				22,500	
7	Allowance for Bad Debts		500	(4) 1,000	(3) 1,200		700				700
8	Accounts Receivable—Rents	300		(5) 50		350				350	
9	Merchandise	192,500			(6) 700 (7) 140,500	51,300				51,300	
10	Supplies	4,000			(8) 3,500	500				500	
11	Insurance Premiums	800			(9) 400	400				400	
12	Troy Building and Loan Association	4,500		(10) 125		4,625				4,625	
13	Store Equipment—Cost	5,000				5,000				5,000	
14	Store Equipment—Allowance for Depreciation		1,000		(11) 400		1,400				1,400
15	Fountain Equipment—Cost	3,000				3,000				3,000	
16	Fountain Equipment—Allowance for Depreciation		500		(11) 360		860				860
17	Office Equipment—Cost	1,000				1,000				1,000	
18	Office Equipment—Allowance for Depreciation		100		(11) 80		180				180
19	Motor Cars—Cost	2,500				2,500				2,500	
20	Motor Cars—Allowance for Depreciation		1,000		(11) 600		1,600				1,600
21	Accounts Payable		20,000				20,000				20,000
22	Notes Payable		15,000				15,000				15,000
23	J. B. Barron Estate		1,200	(12) 1,600	(13) 4,800		4,400				4,400
24	Dividends Payable		1,000				1,000				1,000
25	Capital Stock		50,000				50,000				50,000
26	Retained Earnings		4,050				4,050				4,050

27	Store Sales		145,000				145,000		145,000		
28	Prescriptions		30,000				30,000		30,000		
29	Fountain Sales		50,000				50,000		50,000		
30	Rent Revenue		2,500		(5) 50		2,550		2,550		
31	Miscellaneous Store Revenues		3,000				3,000		3,000		
32	Store Operation Ledger	42,000		(2) 60 (8) 2,800 (14) 300		45,160		45,160			
33	Administration Cost Ledger	23,000		(2) 75 (8) 700 (9) 400 (14) 200		24,375		24,375			
34	State Sales Tax	5,000		(15) 300		5,300		5,300			
35	Property Taxes	1,600				1,600		1,600			
36	Other Taxes and Fees	1,000				1,000		1,000			
37	Interest Revenue		150		(10) 125 (16) 70		345		345		
38	Interest Charges	600		(17) 300		900		900			
		$325,000	$325,000								
39	Store Sales—Uncollectibles			(3) 1,000		1,000		1,000			
40	Prescriptions—Uncollectibles			(3) 200		200		200			
41	Merchandise Write-Down			(6) 700		700		700			
42	Merchandise Cost of Store Sales			(7) 90,000		90,000		90,000			
43	Merchandise Cost of Prescriptions			(7) 19,000		19,000		19,000			
44	Merchandise Cost of Fountain Sales			(7) 31,500		31,500		31,500			
45	Depreciation Cost			(11) 1,440		1,440		1,440			
46	Rent Cost			(13) 4,800		4,800		4,800			
47	Payroll Accrued				(14) 500		500				500
48	Sales Tax Accrued Payable				(15) 300		300				300
49	Interest Accrued Receivable			(16) 70		70				70	
50	Interest Accrued Payable				(17) 300		300				300
51	Federal Income Tax			(18) 1,000		1,000		1,000			
52	Liability for Federal Income Tax				(18) 1,000		1,000				1,000
	Net Earnings							2,920			2,920
				$157,720	$157,720	$332,185	$332,185	$230,895	$230,895	$104,210	$104,210

(8) Individual accounts of tenants must also be charged with rents accrued to date.

(9) Losses due to falling prices, obsolescence, etc. are often buried in merchandise cost of sales but their isolation is desirable, especially where such conditions are unusual.

(10) The procedure followed uses the supplies account to exhibit the inventory balance and charges the amount consumed to the two cost ledgers. The apportionment shown is purely illustrative.

(11) The treatment of insurance expired as an administration cost is arbitrary.

(12) The fact that the stock in the building and loan association has been pledged to secure a loan does not affect the form of entries employed to recognize accumulation of interest, although the special status of this investment may well be indicated in some manner in the position statement.

(13–20) Depreciation cost is shown in a special account instead of being charged directly to the main cost ledgers. This treatment is particularly justified where it is intended to isolate depreciation in the income report. It would be possible, of course, to use the special account as an intermediate cost account, to be absorbed in functional costs by later entries. It is assumed that no additions or retirements have been made during the year.

(23) The estate account is charged with $1,600 and credited with the amount of $4,800 in lieu of a net credit of $3,200, as this procedure reflects the settlement more clearly. In effect accounts receivable are collected to the amount of $1,600, and this amount is applied in partial payment of an obligation which was accrued in the amount of $1,200 at the beginning of the year and which has been increased by $4,800 during the year. The balance now due the Estate is $4,400. The current rent charge, $4,800, is set up in a special cost account as no basis for distributing this charge between store operation and administration is assumed in the adjusting data. As in the case of depreciation the rent cost might be apportioned in terms of functional or departmental accounts.

(24) Charging dividends directly to retained earnings as a matter of ledger procedure does not prevent the showing of dividends as a distribution of current earnings in the income statement. See later discussion of income statement.

(32) (33) The liability is recognized and the cost accounts charged.

(34) The use of a tax cost account, in lieu of a direct charge to sales, is especially justified where the tax is levied as a business tax on the total volume of revenue rather than as a special charge on the customer which the merchant is responsible for collecting.

(37) (38) These are typical entries covering interest accruals.

(51) (52) The amount assumed, $1,000, roughly illustrates this type of tax without reference to the details of calculation under prevailing statutes and regulations.

Completion of Work-Sheet Columns. After the adjusting entries of the work sheet have been completed and proved these entries are combined with the original trial-balance data to form the adjusted trial balance. The adjusted figures are then distributed appropriately in the four statement columns, and the sheet is completed by balancing these columns with the amount of net earnings (in this

case) and entering column footings. The final proof of the work sheet is found in the equality of position-statement column totals. It should be recognized that this proof, like similar checks at other points, simply shows that the equation of debits and credits, with which the work of the sheet began, has been maintained throughout. It does not demonstrate that the adjustment data have been soundly interpreted and properly recorded, or that each adjusted account has been attached to the proper statement. The inclusion of sales figures in the credit position-statement column rather than in the credit income-statement column, for example, would be an egregious blunder, but would not destroy the equilibrium of debits and credits.

Intermediate transfer entries may be included in the adjusting entries of the work sheet in some cases but the final closing entries by which the income statement accounts are summarized are not represented. For the purpose of the work sheet the income-statement columns themselves constitute a summary of such accounts, and the setting up of complete closing entries with the adjustments would evidently result in the elimination of these essential columns. In general the entries displayed in the work sheet should be confined to those necessary to register the effect of the adjusting data in such manner that each adjusted account will represent a clear-cut figure suitable for listing in the statement columns.

It should not be assumed that the debit position-statement column represents assets exclusively and that the credit column shows only final liability and proprietary equity balances. For example, the various allowances for depreciation are offsets to the costs of the corresponding assets appearing in the debit column. In the income-statement section, similarly, the debit column may be employed to show adjustments of nominal revenue figures and contras to cost balances are sometimes listed in the credit column, although no examples are found in this illustration with the possible exception of the charges for estimated uncollectibles.

Income Statement Based on Work Sheet. The income report is drawn from the income-statement columns of the work sheet, reference being made during the process—wherever needed—to supporting schedules and compilations and other records available. A condensed income statement of the Barron Drug Co., taken from the illustrative work sheet shown on pages 402–403, appears on page 406. Four schedules of supporting data are also given.

BARRON DRUG COMPANY

Income Statement

Year Ended December 31, 1949

Sales (Schedule I)	$225,000		
Less Estimated Bad Debts (Schedule I)	1,200	$223,800	
Other Revenue (Schedule II)		5,895	$229,695
Expenses and Taxes:			
Expenses—			
Merchandise Cost of Sales (Schedule I)	$140,500		
Store Operation Costs (Schedule III)	45,160		
Administration Costs (Schedule IV)	24,375		
Rent Cost	4,800		
Depreciation Cost	1,440		
Merchandise Write-down	700	$216,975	
Taxes—			
State Sales Tax	$ 5,300		
Property Taxes	1,600		
Federal Income Tax	1,000		
Other Taxes and Fees	1,000	8,900	225,875
Net Income			$ 3,820
Interest Charges			900
Earnings of Stockholders			$ 2,920
Dividends Declared in 1949			2,000
Earnings Retained in Business			$ 920
Retained Earnings, January 1, 1949			6,050
Retained Earnings, December 31, 1949 (see position statement)			$ 6,970

BARRON DRUG COMPANY

Schedule I

Departmental Sales and Cost of Sales

Year Ended December 31, 1949

	Store	*Prescriptions*	*Fountain*	*Total*
Sales	$145,000	$30,000	$50,000	$225,000
Less Estimated Bad Debts	1,000	200	-0-	1,200
	$144,000	$29,800	$50,000	$223,800
Merchandise Cost of Sales	90,000	19,000	31,500	140,500
Trading Margin	$ 54,000	$10,800	$18,500	$ 83,300

Schedule II

Other Revenue

Year Ended December 31, 1949

Rent Revenue	$2,550
Miscellaneous Store Revenues	3,000
Interest Revenue	345
	$5,895

Schedule III

Store Operation Costs
Year Ended December 31, 1949

Salaries—Store Manager	$ 4,900
Salaries—Registered Clerks	8,400
Other Store Wages and Salaries	9,600
Commissions and Bonuses	4,000
Gas, Water, Electric Energy, Fuel	3,000
Store Supplies	2,900
Maintenance of Equipment	2,000
Delivery Service	3,500
Telephone and Telegraph	1,500
Laundry and Sanitation	2,360
Miscellaneous	3,000
	$45,160

Schedule IV

Administrations Costs
Year Ended December 31, 1949

Salaries—Officers	$ 4,800
Officers' Bonuses	1,000
Wages and Salaries—Clerical	4,200
Office Supplies and Stationery	800
Insurance	1,500
Credit and Collection Costs	1,000
Advertising and Promotion	3,500
Traveling Costs	1,800
Legal and Accounting Costs	3,000
Miscellaneous	2,775
	$24,375

The income statement represents a thoroughgoing rearrangement of the columnar data of the work sheet. The accounts of the trial balance are not always in statement order and the additional account titles required in making adjusting entries, listed below the original trial balance, will certainly not appear in the order desired for statement purposes. The statement is designed to furnish information to interested parties and the material presented should be threaded together systematically from the point of view of the reader, without stressing debit and credit classification and other technical features of the work sheet and the underlying records. In the statement it may be desirable to present certain data in combination which may properly appear as single items in the work sheet, and account titles may require modification for statement purposes. The statement, moreover, should emphasize certain balances which are not computed in the work sheet.

In the example the composition of the figures for sales, bad debts,

and merchandise cost is shown in Schedule I, and the data of the schedule are taken directly from the income-statement columns of the work sheet. "Other revenue" is a combination of three work sheet items and the breakdown is shown in Schedule II. The figures for "expenses and taxes"—with the exception of merchandise cost of sales—are taken intact from the work-sheet compilation. "Net income" is an example of a balance not computed in the work sheet.

The handling of dividends and retained earnings represents a special condition. In the ledger dividends were charged to retained earnings prior to the compilation of the work sheet. In the income statement the amount of dividends is deducted from net earnings for the year, and the difference is shown as an addition to retained earnings. If desired, entries might be made on the work sheet by charging a dividends account and crediting retained earnings, thus providing for inclusion of the dividend deduction in the income-statement columns. Such entries, however, would not be journalized and posted on the books proper. The use of the caption "retained earnings, January 1, 1949," assumes that no entries have been made in this account during the year with the exception of the dividend charges.

Form of Income Statement. In this example the sales of the various departments are merged and merchandise cost of sales for all departments is grouped with other costs under the general title "expenses and taxes." The supporting departmental data are displayed in a supplementary exhibit, Schedule I. The treatment of the current allowance for uncollectibles as an offset to gross sales (in Schedule I as well as in the main statement) follows earlier suggestions as to the character of this adjustment. In practice this deduction is often presented as an expense—under a special head or as an element of the cost of credits and collections. On the other hand sales returns and allowances (for which no amount was assumed in this example) are commonly handled as direct sales deductions. The figures showing the "trading margin" on each class of sales may be of some use in departmental analysis but have little significance to most readers of financial statements. All revenues, including interest, are totaled, and in this example as in earlier illustrations the position is taken that piecemeal deduction of expenses from revenues is not desirable for statement purposes.

The gathering of costs under "store operation" and "administra-

tion," with no indication of the application of the various costs to the different types of sales, is intended merely as a rough suggestion of possible groupings. In practice the "miscellaneous" items would presumably be broken down to some extent, although it is generally not feasible to avoid the use of a "miscellaneous" account altogether. Utility services and various other items appearing under "store" costs might be viewed as in part "administrative" charges, and similarly the cost of insurance, appearing in Schedule IV, might reasonably be shown in whole or in part in Schedule III. The charges for rent and depreciation, recognized in the general ledger in this example, might readily be allocated to the two subsidiary cost ledgers if this were considered desirable. The same might be said of some types of taxes. The form of statement used here—including the supplementary schedules—gives some weight to the importance of showing the data of expenses in terms of the original or "natural" classification of charges as well as to the need for functional or departmental groupings.

In this statement tax charges are shown in some detail; if greater condensation were desired in the main statement the details might be shown in a supporting schedule. The special merchandise adjustment is included in total expenses instead of being reported as a loss. This treatment assumes that the write-down is an incident of operating activity rather than an extraordinary occurrence.

Position Statement Based on Work Sheet. The position statement of the Barron Drug Co. based on the illustrative work sheet is shown on page 410. This statement of assets and equities is drawn directly from the last two columns of the work sheet, with some reference to supplementary data. All three cash items are shown in one figure for statement purposes, rents and interest receivable are totaled, the supplies item is included with merchandise, and the equipment accounts—other than motor cars—are combined. The descriptions used in some cases (e.g., "unexpired insurance") do not conform precisely to the account titles appearing in the work sheet. The liabilities are shown in the same detail as in the work sheet, although several of the small accrued items might readily be reported under one heading. The figure for retained earnings is the sum of the balances appearing on the "retained earnings" and "net earnings" lines of the work sheet, and agrees with the final item appearing in the income statement.

BARRON DRUG COMPANY

Position Statement

December 31, 1949

Assets

Current:			
Cash on Hand and in Bank		$ 4,965	
Government Bonds		5,000	
Notes Receivable		3,000	
Customers' Accounts Receivable	$22,500		
Less Allowance for Bad Debts	700	21,800	
Rents and Interest Receivable		420	
Merchandise and Supplies (1)		51,800	
Unexpired Insurance		400	$87,385
Investment in Troy Building and Loan Association Stock (2)			4,625
Fixed:			
Store, Fountain, and Office Equipment—Cost	$ 9,000		
Less Allowance for Depreciation	2,440	$ 6,560	
Motor Cars—Cost	$ 2,500		
Less Allowance for Depreciation	1,600	900	7,460
			$99,470

Equities

Current Liabilities:		
Accounts Payable	$20,000	
Notes Payable (2)	15,000	
J. B. Barron Estate (3)	4,400	
Federal Income Tax Liability	1,000	
Sales Tax Accrued Payable	300	
Payroll Accrued	500	
Interest Accrued Payable	300	
Dividends Payable	1,000	$42,500
Stockholders' Equity:		
Capital Stock (500 shares, par $100 each)	$50,000	
Retained Earnings	6,970	56,970
		$99,470

(1) Valued at cost less deduction of $700 for obsolescence and shopwear.
(2) Pledged as security for liability of $15,000 due July 1, 1950.
(3) Balance of rent payable due January 1, 1950, under agreement with Estate recently made.

Arrangement of Position Statement. The general arrangement of the statement shown here follows the form adopted in previous examples.

The investment in building and loan stock is excluded from the current group as such and reported as a separate item preceding the fixed tangible assets. Where such stock can be liquidated through the association treasury on demand or short notice, at full accumulated value, it may be reasonable to treat the investment as a market-

able security held as part of working capital. The policy of the management with regard to the investment is a factor. In this case the treatment followed is particularly justified by the fact that the stock is pledged. Among other assets which may be included in an investment area following current assets are stocks of associated companies, sinking funds (under some conditions), pension funds, and surrender value of life insurance.

The showing of the cost of motor cars and the applicable depreciation separately, with the three other types of equipment combined, has no substantial justification. There are the minor points that such equipment is subject to a high rate of depreciation and is probably more readily salable than the other fixed assets.

Current liabilities may be arranged by due dates, legal priority, or size of items. In general no particular order has any special merit and no attempt has been made here to follow a set pattern. Where advances by customers (or other liabilities payable in goods or services rather than money) are present such liabilities may well be listed last under the current group.

The practice of using footnotes and explanations, which has become widespread in recent years, is illustrated here in a small way. The position statement, like the income statement, may be supported by one or more schedules showing particular asset or equity items in some detail.

Questions

1. What is the function of the work sheet? Discuss the work sheet from the standpoint of variation in form.

2. Do the adjusting entries of the work sheet correspond precisely to those compiled for the purpose of posting adjustments? Explain. Why are closing entries not incorporated in the work sheet?

3. How is the work sheet proved? Indicate the limitations of such proof.

4. Point out some of the differences between the position-statement columns of the work sheet and a statement suitable for transmission to stockholders.

5. Explain and illustrate the use of supporting schedules.

6. In what connection is the disclosure of "trading margin" of significance?

7. Discuss the treatment of each of the following in the income report: charge for estimated bad debts; miscellaneous operating revenues; sales tax; income tax; dividends; interest charges; depreciation; merchandise cost of sales; loss due to merchandise obsolescence.

8. Discuss the treatment of each of the following in the position statement: interest accrued receivable; prepaid insurance; allowance for depreciation; retained earnings; hypothecated receivables; liability for income tax; government bonds.

XXI

CASH AUDIT AND ADJUSTMENT

Verifying Cash on Hand. Cash may be lost or stolen; mistakes in either direction may be made in making change. These possibilities (as well as other considerations) make it necessary to make periodic checks of cash to demonstrate the accuracy of the cash record or to disclose the amount of discrepancy, if any. In most concerns these inventories are taken at relatively short intervals, frequently from day to day, and form a part of the regular system of control and internal check.

In verifying cash on hand in drawers, registers, etc. the auditor finds it desirable to observe certain working rules. If possible the count of cash should be made after the close of business so that the process of verification will not be disturbed. Care must be exercised to prevent unauthorized shifting of funds while the work is in progress, and in some cases it may be desirable to verify the separate registers or other repositories simultaneously. Where there is suspicion of fraud it may even be necessary to seal one or more cash receptacles until the count is complete. Occasionally the device of a second and later count of all or a part of the cash is employed as an added precaution. The statement prepared by the auditor should show the composition of cash on hand in detail. In particular all checks and other credit instruments included, and—in the case of imprest funds—all vouchers and cash memos, should be listed. Doubtful items should be segregated and investigated. It is important that duplication be avoided in the count, and at the same time care must be taken to see to it that no genuine cash items, however small, are omitted. Occasionally the auditor finds unclaimed pay envelopes or other unusual items not shown as cash on the books.

Especially in the case of a concern with one or more branch stores or other establishments located at some distance from the main office there is likely to be some cash in transit at the date of verification. In such cases special precautions must be taken to prevent duplicate counting and omissions.

It should be recognized that even if the result of the count appears to validate book figures it is by no means certain that all transactions have been properly handled and that no cash has been lost or misappropriated. There is always the possibility that the records have been so manipulated as to cover the traces of errors or abstractions, at least temporarily.

Verifying Bank Balances. The most important point to observe in the periodic verification of bank balances, especially where the work is done by an outside auditor, is the necessity for an independent statement from the bank; passbooks and other records not coming directly from the bank to the auditor are not sufficient evidence if there is any ground for suspecting fraud. The difference between the bank account and the corresponding ledger account, in the form of outstanding checks, interest, exchange, etc. should receive full attention. Each bank account should be independently analyzed in terms of the particular ledger account applicable thereto. In general the bank balance should be verified as of the date of the count of cash on hand.

The audit of the bank account may also include an examination and listing of all checks drawn and paid since the date of the preceding verification. In this work, checks should be scrutinized as to amounts, dates, signatures and endorsements, and in some cases comparison may be made with vouchers and other documents supporting the disbursement. Check books should be examined and all spoiled checks listed and traced. Especial attention should be directed to the transactions immediately preceding and following the date of the audit. Checks which have been outstanding for an unreasonably long time should be investigated. Checks drawn to order of employees, or to "bearer," "cash," etc., should be listed and receive special attention. Checks representing transfers between banks should be noted and compared with the corresponding deposits.

Discovery of Defalcations. The auditor finds it helpful, in the verification of cash, to be familiar with the devices employed by dishonest cashiers and others handling cash to cover their tracks, as a

knowledge of such methods often facilitates the discovery of shortages through a careful examination of the cash records and underlying papers, coupled with a complete inventory of all cash balances.

Among the devices encountered are the following: (1) transfer of funds from one bank to another, the check not being deducted from the balance of the bank account on which drawn and the check stub being marked "void" or canceled; (2) inclusion in cash funds of fictitious items and inclusion of worthless checks in bank deposits; (3) falsification of footings in cash books and elsewhere; (4) complete suppression of the record of a cash receipt such as a payment by a customer; (5) overstatement of costs such as freight charges on purchases, collection expenses, etc., or recording of purely imaginary disbursements; (6) inclusion of cash receipts in bank deposits without deduction from cash on hand until a later period; (7) drawing checks against fictitious funds and making the same good before presentation.

These are not necessarily independent methods; two or more may be found in a particular situation. Several of the practices listed, evidently, could hardly be expected to do more than postpone the disclosure of irregularities. The use of an adequate system of underlying documents and records, together with a sound scheme of division of labor and responsibility, will tend to prevent misappropriation of funds, and will make it difficult if not impossible for any cashier or other employee who has taken money to avoid discovery.

Recording Cash Shortage and Overage. Where a shortage is discovered the cash account is adjusted by a credit for the amount of the deficiency. The concurrent charge may first be lodged in a special cash shortage account. Such segregation has the advantage of encouraging investigation and facilitating comparison of periodic amounts. The next question concerns the final disposition of the charge. If the amount is relatively small and appears to have arisen as a more or less unavoidable incident of the routine handling of cash—for example, in making change—treatment as an item of miscellaneous expense, applicable to current operations, is justified. If the circumstances are such that the cashier or other responsible employee is required to make good the shortage the amount is chargeable to the employee's account as a receivable, which is either to be collected or absorbed as a deduction from the next pay check.

A large shortage is presumably the result of a defalcation. In this

situation, and assuming that all employees involved are bonded, the amount of the shortage should be charged at the outset to a suspense account representing the tentative claim against the surety (including any amount which may prove to be uncollectible), and if and when the claim is approved the amount recoverable should be transferred to an appropriate account receivable, the balance, if any, being written off as a loss. If there is no surety, and no other means of recovery, the entire amount of an embezzlement represents a loss. In any event the amount of the loss should be clearly reported in the income statement.

The adjustment for a cash overage should be made by debiting the appropriate cash account and crediting a special overage account. Where the item is small the final treatment may well consist of disposing of the item as an incidental adjustment of revenue.

Where both shortage and overage are present, with respect to different change funds or imprest accounts, the use of a single account, "cash—short and over," for the specialized record is a convenience. The net amount of such an account, in the case of minor adjustments, may then be treated as an incidental expense or revenue credit.

As pointed out in an earlier chapter, daily verification of cash on hand is standard procedure in the up-to-date office, and where such procedure is in effect daily entries for any item of shortage or overage are in order.

Interest on Bank Balances. Interest is no longer allowed on commercial balances and savings accounts are not common among business concerns. Where a savings account is used it is of course necessary to recognize accrued interest from time to time. In this connection a complication arises due to the fact that banks in general accrue interest on balances in accordance with more or less arbitrary rules rather than on a strict time basis. Usually no interest is allowed on sums on deposit for less than three months and interest is calculated only in terms of complete months in accordance with definite regulations established by the bank. In such circumstances the conservative procedure is to recognize interest on the depositor's books only when it has been booked by the bank or can be accrued in accordance with a strict interpretation of the bank's rules, since interest accrued on a time basis, and which may not be realized because of an early withdrawal of funds, is merely a contingent item. On the other hand, in cases where funds will almost certainly remain

on deposit until the next effective interest date it may be urged that interest contingently accrued is a good asset and should be recognized in the depositor's accounts, at least at the close of the accounting period. This need not mean that all the interest accrued under these conditions should be charged to the bank account. The proper procedure is to include in the bank balance only that portion of the interest accrued which has already been booked (or may be, under the rules) by the bank, and to treat the balance as interest receivable, an asset which may be transferred to cash as it becomes recognized or recognizable by the bank.

The amount of interest accrued on bank balances at any time constitutes a credit to interest revenue on the depositor's books.

Adjustments for Exchange and Service Charges. Ordinary checks and similar credit instruments received from customers and others are commonly charged to cash at face value. In making up deposits, likewise, checks are regularly listed at stated values. It not infrequently happens, however, especially in the case of checks drawn on distant banks or banks in foreign countries, that deductions are made by the bank for collection or exchange charges. The amount of such adjustments, evidently, must be credited to the bank account and debited to an appropriate expense or revenue adjustment account. If the amount of the deduction is definitely ascertainable on the occasion of making the deposit the bank account should be immediately adjusted; otherwise recording the entries may be postponed until the end of the month, when the bank statement is received.

If the bank immediately makes the deduction from the gross amount deposited the proper procedure on the depositor's books is to charge the bank account with the net deposit and debit an expense or offset to revenue for the difference between the net deposit and the credit to cash. In some cases the amount of the bank's charge is paid from petty cash. Where this is done there is no adjustment of the deposit, either at the outset or later, and the amount of the charge is recognized on the depositor's books in the same manner as are other expenditures from imprest funds.

If the original charge to cash exceeds the unquestioned net cash value of the remittance, whether it be directly from a customer or from a selling branch, it may be urged that the deduction should be interpreted as an adjustment of a nominal revenue, rather than as an expense or loss. For example, if checks are received from credit cus-

tomers on account with a face value of $10,000, and it is known that the regular deduction which will be made by the bank will amount to $25, it is clear that crediting customers' accounts with the full amount of $10,000 is equivalent to the granting of a special discount or allowance of $25. And from this standpoint the appropriate entries to record receipt of these checks and their deposit—assuming that it is convenient to charge cash with the face amount and that only the net amount of the deposit is recognized by the bank—are as follows:

(1)

Cash	$10,000	
Accounts Receivable		$10,000
To record collections		

(2)

Bank	9,975	
Sales Allowances	25	
Cash		10,000
To record deposit and recognize amount of special allowance		

On the other hand it can still be argued that the depositor is in effect buying a special service from the bank—a service which consists in the conversion of customers' remittances into a more convenient form of cash—and that the amount of the deduction by the bank is therefore a cost of service, chargeable to operation, rather than a special sales allowance. Where the amount of the deduction is small either treatment is satisfactory from a practical standpoint, but in special situations the point may be of some importance in the interpretation of departmental results.

Overdrafts. An overdraft occurs when checks are drawn in excess of funds on deposit. If handled on the depositor's books in the regular way this condition of course gives rise to a credit balance in the overdrawn bank account.

Banks occasionally honor an overdraft for a short period. The bank, that is, pays checks in excess of the balance available, thereby in effect making a temporary loan to the depositor. Where this occurs it is of course expected by the bank that the deficiency will be made good immediately by additional deposits, and if this is done no special adjustment of the depositor's account is required. If, however, an overdraft exists at the close of the period, the amount thereof should appear in the financial statement as a liability. In this situation it may be advisable to close the bank account in the ledger

temporarily and set up the liability in a separate account. The entries required are a debit to the regular bank account and a credit to the overdraft account. If desired a distinction may be drawn between the amount of checks outstanding in excess of the amount on deposit and the amount of the overdraft already honored by the bank.

Outstanding Checks. In general checks are credited to the bank account as drawn, thus reducing the amount of the recorded bank balance. Moreover, accountants seldom if ever make an adjustment for the amount of checks drawn which have not yet been paid by the bank, which means that in the statement at the end of the period no distinction is recognized, with respect to the amount of cash reported and the amount of liabilities stated, between the effect of checks paid and checks still outstanding. The propriety of this traditional treatment has sometimes been questioned. Outstanding checks (ignoring special cases of funds in transit and the like) represent liabilities in process of payment rather than an actual reduction in cash resources. A check is a bill of exchange, a special type of order to pay, and when a check is drawn in favor of a creditor on open account, for example, this means that a special type of liability has been substituted for an ordinary account payable. There is the further point that prior to payment by the bank it is possible for the drawer to stop payment, or to draw additional checks which may be presented and absorb the available cash before all of those previously outstanding are cleared.

To illustrate the possible adjusting entries in this connection assume that on December 31 a comparison of the bank account of the M Co. with the statement furnished by the bank shows that checks have been drawn that have not yet been paid by the bank in the amount of $800. With this condition the following entries might be made:

National City Bank	$800	
Liabilities Covered by Outstanding Checks		$800

By means of these entries the bank account is made to reflect the precise amount of funds in the bank and the special status of the liabilities covered by checks not yet honored is shown. In order to return to the regular procedure during the ensuing period it would of course be necessary to reverse these entries on January 1.

It is not intended to suggest that the regular practice of charging liabilities and crediting bank upon the occasion of issuing checks is improper. Drawing a check is generally the decisive step in the chain of routine circumstances making up the process of payment; presentation by the creditor and actual payment by the bank follow as a matter of course in the great majority of cases. The point at issue is purely that of a clear and complete statement of the elements of financial position. Strictly speaking payment has not been made until the check is honored by the bank, and if it is desired to emphasize this point in the statements adjusting entries may be made as indicated. An alternative is the use of an explanatory comment or footnote calling attention to the amount of outstanding checks. For most situations, where the auditor has every reason to assume that unpaid checks in effect constitute a reduction of the bank balance, neither adjusting entries nor special explanations are necessary.

Valuation and Conversion of Cash. With respect to cash, the medium through which all values are measured, there is in general no problem of periodic revaluation. Cash may be short or over, and there are various adjustments to be made in connection with the bank account, as explained above, but where a business is operating under a sound monetary system the cash units employed are not subject to either increase or decrease in amount as a result of business operation and the passage of time. The *value* of cash is of course subject to change in the sense that its purchasing power, as reflected in the price level, varies. The *number of dollars* or other units involved in a given amount of cash, however, is in no way altered by the movement of prices.

A particular business enterprise may nevertheless hold cash in a number of forms, some of which are subject to fluctuation in terms of that form which is used as a measuring unit, and here a problem of periodic conversion is involved. Thus a concern which maintains funds on deposit in banks or other institutions in foreign countries, or has foreign currency on hand in branches located abroad or in funds at the home office, finds it necessary at the close of each fiscal period, or at any other time when a complete statement of the condition of cash is required, to convert all foreign cash items into domestic currency. The usual rule for accomplishing this is to apply the rate of exchange effective on the date on which or as of which the

conversion is required. If pounds sterling, for example, are quoted at \$4.00 in New York, a balance of £1,000 which an American enterprise has on deposit in a London bank would represent \$4,000 for the purpose of a statement showing the cash position of such enterprise in terms of dollars. See Chapter XXXI for further discussion of the problem of converting foreign funds.

Similarly, where several forms of domestic currency are in use, and one or more forms circulate at a discount or at a premium in terms of the type of currency which constitutes standard money, it is necessary to reduce all funds on hand to a common denominator, and to revalue the various non-standard cash items on hand from time to time, especially where the discount or premium is fluctuating. American business concerns, fortunately, have not been seriously troubled with this problem for many years.

Mention has been made earlier of the fact that checks received from customers may have a recognized value of less than the face amount. It follows that where checks are on hand—undeposited—at the close of the period which have been charged to cash at face, but which as a potential bank deposit are worth less than face, an adjustment to net value for statement purposes is desirable. Further, checks with respect to which there is any doubt as to final collectibility should in general be excluded from cash on hand and reported as a receivable, with an appropriate offset to measure the uncollectible element.

The amount of any write-down resulting from the valuation or conversion of cash should be treated as a special expense or loss as circumstances indicate. Similarly the amount of an increment arising through conversion, and brought upon the books, should be reported as a special revenue.

Bank Summary and Reconciliation Schedules. In connection with the periodic comparison of the bank statement and the corresponding bank account a summarizing and reconciliation schedule is usually prepared. This schedule may be in a variety of forms and may be set up in more or less detail. It may begin with the balance as shown by the statement and conclude with the balance as shown by the ledger, but the reverse order is quite as effective. This subject was considered briefly in Chapter XIII, but will be dealt with somewhat more fully at this point.

An example will again be useful. At the beginning of business on

December 1, 1949, the bank account of the Bay Baking Co. shows a debit balance of $30,000. The outstanding checks on this date (checks not as yet presented for payment) total $1,500. During the month of December, according to the Company's books, before adjusting entries, deposits total $60,000, and checks issued amount to $65,000. Comparison of paid checks returned by bank with statements and checks issued as shown by check books and check register shows that the outstanding checks on December 31 total $1,000. On December 31 a deposit of $500 was made up and placed in the night box at the bank after banking hours. The statement received from the bank covering the month of December shows a balance on November 30 of $31,500, deposits during December of $59,500, checks paid during the month of $65,500, and deduction for exchange and other service charges of $5. The statement on page 422 is a bank account summary and reconciliation schedule based on these data.

Outstanding checks usually constitute the principal item of difference between the balance as shown by the bank statement and the balance shown by the depositor's books. The example also illustrates the differences arising from late deposits and service charges. There is also the possibility of errors either in the bank statement or in the depositor's records or in both. An example of an error by the bank is the charging of a check to the wrong account.

In some cases it may be desirable to reconcile in detail particular elements of the bank statement with related figures in the ledger. For example, in the above illustration the deposits as shown by the bank statement can be reconciled with the deposits as shown by the ledger in the following manner:

Deposits in December, per statement	$59,500
Deposit after banking hours, December 31	500
Deposits in December, per ledger	$60,000

Similarly the two records of disbursements can be harmonized, as follows:

Checks paid by bank in December	$65,500
Checks outstanding, November 30	1,500
	$64,000
Checks outstanding, December 31	1,000
Checks issued during December, per check register	$65,000

BAY BAKING COMPANY
Summary and Reconciliation of Bank Account
December 31, 1949

First National Bank
General Checking Account

Summary of Statement

Balance, November 30		$31,500
Deposits in December, per statement		59,500
		$91,000
Paid checks returned	$65,500	
Deduction for service charges	5	65,505
Balance, per statement, December 31		$25,495

Reconciliation

Outstanding checks, December 31:		
#462	$ 100	
468	300	
471	50	
472	250	
473	175	
474	25	
475	100	1,000
		$24,495
Deposit December 31, not in statement		500
Service charges, not credited on books		5
Balance, per ledger, before adjustments, December 31		$25,000

Summary of Account

Balance, December 1	$30,000
Debits (deposits) during December	60,000
	$90,000
Credits (checks issued) during December	65,000
Balance, per ledger, before adjustments, December 31	$25,000

If desired the schedule may be restricted to the reconciliation section as shown in the above example. Under another variation the balance shown by the bank statement is reconciled with the final adjusted balance of the bank account on the books instead of with the amount appearing in the trial balance. In general this form of schedule is less satisfactory, particularly where adjusting entries are made for outstanding checks and overdrafts.

Where the month adopted by the bank does not coincide with the

depositor's month it is necessary, in order to effect a reconciliation as of the date of the statement, to omit or deduct from the book balance the ledger entries made between the date of the statement and the end of the month as shown by the depositor's books. The alternative is to amend the data of the bank statement, in terms of the bookkeeping period, on the basis of supplementary information obtained from the bank. In any event it is necessary to secure additional information from the bank if it is desired to determine the amount of the outstanding checks as of the date of the depositor's month.

A bank reconciliation schedule should be prepared for each separate bank account, and where there are a considerable number of accounts a columnar recapitulation of reconciliation schedules may well be prepared. All reconciliation statements should be filed as a part of the permanent cash records.

Illustrative Exercise. For the purpose of emphasizing cash adjustments and the preparation of summarizing and reconciliation statements an illustrative problem is presented, with solution.

Data

The Wing Co. maintains two commercial bank accounts, one with the Drovers State Bank and the other with the Butte National Bank. All receipts are charged to the general cash account on the books and are regularly deposited; all disbursements in currency are made through a special imprest cash account, established and replenished by check. On December 1, 1949, the final audited and adjusted balances of the four cash accounts are as follows:

	Dr.
Cash	$ 300
Office Cash Fund	200
Drovers State Bank	2,500
Butte National Bank	4,300

At this point the only difference between the account with the Drovers State Bank on the depositor's books and the balance shown on the bank's statement issued at the close of business on November 30 is represented by outstanding checks totaling $500. In the case of the account with the Butte National Bank, however, the last formal statement from the bank was prepared at the close of business Saturday, November 26, when the outstanding checks totaled $300, and the deposits made and the checks drawn November 28–30 amounted to $600 and $800, respectively. At the close of business on November 30 the auditor found, upon inquiry at the bank, that the bank balance was $4,700 and that checks paid November 28–30 totaled $700.

For the month of December the transactions affecting the cash accounts recorded on the books up to the point of the trial balance as of the close of business December 31 are as follows:

(1) Total cash receipts, $40,000.
(2) Total deposits: in Drovers State Bank, $18,100; in Butte National Bank, $22,200.
(3) Amount of checks drawn: on Drovers State Bank, $21,000; on Butte National Bank, $25,000.
(4) Expenditures reported from imprest fund, $800; amount of checks drawn on Butte National Bank to replenish fund (included in total given above), $800.

The statement furnished at the close of business on December 31 by the Drovers State Bank shows the following:

(1) Balance, December 1, $3,000.
(2) Deposits credited, $17,700.
(3) Checks paid, $20,800.
(4) Service charges and other deductions, $5.
(5) Balance on December 31 (overdraft), $105.

The statement of the Butte National Bank furnished at the close of business on December 31 shows the following:

(1) Balance, November 26, $4,800.
(2) Deposits credited, $22,800.
(3) Checks paid, $25,850.
(4) Balance, December 31, $1,750.

Additional data determined by the auditor of Wing Co.:

(1) A check for $200 drawn by Winton Co. is included in canceled checks submitted with last statement of Butte National Bank, and charged to Wing Co. account.
(2) A deposit of $400, made on the afternoon of December 31, is not included in deposits reported in the last statement of the Drovers State Bank.
(3) On December 31 payment was stopped on one check for $50 drawn on the Butte National Bank on December 30, payable to an employee, as it was found that it had been delivered to the wrong party. The charge when the check was issued was to payroll, and the correction has not yet been made on the books or a new check issued. To date this check has not been presented to the bank for payment.
(4) The actual cash in the imprest fund amounts to $120, and the vouchers on hand account for disbursements of only $75; the amount of the shortage, presumably resulting from an error in making change, is deductible from the cashier's next pay check.

Directions

(*a*) For each bank account prepare a schedule summarizing the data furnished by the bank and the data shown on the books, before adjusting or correcting entries, and reconciling the bank balance reported by the bank with the depositor's trial-balance figure.

(*b*) In skeleton journal form prepare the entries necessary to correct and adjust the four cash accounts.

(*c*) In condensed skeleton form present the accounts with cash elements as they would appear when balanced and ruled as of December 31.

Solution

WING COMPANY

Bank Accounts

Summary and Reconciliation Schedules

December, 1949

(1)

Drovers State Bank

Commercial Account

Summary of Statement

Balance, December 1		$ 3,000
Deposits, December 1–31		17,700
		$20,700
Paid checks returned	$20,800	
Service charges and other deductions	5	20,805
Overdraft, per statement, December 31		$ 105

Reconciliation

Outstanding checks, December 31 (list attached)		700
		$ 805
Deposit on December 31, not in statement	$ 400	
Service charges, etc., not on books	5	405
Overdraft, per ledger, before adjustments, December 31		$ 400

Summary of Account

Balance, December 1	$ 2,500
Debits (deposits) during December	18,100
	$20,600
Credits (checks issued) during December	21,000
Overdraft, per ledger, before adjustments, December 31	$ 400

(2)

Butte National Bank

Commercial Account

Summary of Statement

Balance, November 26	$ 4,800
Deposits, November 28–December 31	22,800
	$27,600
Paid checks returned	25,850
Balance, per statement, December 31	$ 1,750

Adjustment and Correction of Statement

Add Winton check improperly charged to this account	200
Correct statement balance, December 31	$ 1,950

Reconciliation

Outstanding checks, December 31 (list attached)	400
	$ 1,550
Check issued on December 31, with payment stopped the same day	50
Balance, per ledger, before adjustments, December 31	$ 1,500

Summary of Account

Balance, December 1	$ 4,300
Debits (deposits) during December	22,200
	$26,500
Credits (checks issued) during December	25,000
Balance, per ledger, before adjustments, December 31	$ 1,500

The total of the outstanding checks for December 31 in the case of the Drover State Bank is verified as follows:

Amount outstanding at opening of business, December 1	$ 500
Issued during December	21,000
	$21,500
Paid by bank during December	20,800
Amount outstanding, December 31	$ 700

The amount outstanding on December 31 drawn on the Butte National Bank is verified as follows:

Amount outstanding at opening of business, November 28		$ 300
Issued, November 28–30		800
		$ 1,100
Paid by bank, November 28–30		700
Amount outstanding December 1		$ 400
Issued during December	$25,000	
Amount of check on which payment was stopped	50	24,950
		$25,350
Paid by bank, December 1–December 31, as reported	$25,150	
Less Winton check improperly charged to this account	200	24,950
Amount outstanding, December 31		$ 400

The checks outstanding should be listed individually, by number and denomination, either on the face of the reconciliation schedule or on a supplementary sheet.

Adjusting Entries

(1)

Miscellaneous Expense	$ 5	
Drovers State Bank		$ 5
To record service charges and other special deductions		

(2)

Drovers State Bank	405	
Overdraft—Drovers State Bank		405
To close to special account the adjusted amount of overdraft		

(3)

Butte National Bank	50	
Payroll		50
To reverse entries made covering issue of check on which payment has been stopped		

(4)

Office Expense (and other accounts affected)	75	
Payroll (assuming a liability for pay check has been or will be accrued)	5	
Office Cash Fund		80
To record expenditures to date and charge payroll with shortage		

It would be possible to make additional adjusting entries to restore to bank accounts and to liabilities the amount of unpaid checks, as explained earlier, but this is not considered to be necessary here.

Skeleton Accounts

CASH

Dec. 1	Balance	√	300	Dec. 1–31		RJ	40,300
1–31		RJ	40,000				
			40,300				40,300

OFFICE CASH FUND

Dec. 1	Balance	√	200	Dec. 1–31		CB	800
1–31		CR	800	31		CB	75
				31		J	5
				31	Balance	√	120
			1,000				1,000
Jan. 1	Balance	√	120				

DROVERS STATE BANK

Dec. 1	Balance	√	2,500	Dec. 1–31		CR	21,000
1–31		RJ	18,100	31		J	5
31		J	405				
			21,005				21,005

BUTTE NATIONAL BANK

Dec. 1	Balance	√	4,300	Dec. 1–31		CR	25,000
1–31		RJ	22,200	Dec. 31	Balance	√	1,550
31		J	50				
			26,550				26,550
Jan. 1	Balance	√	1,550				

OVERDRAFT—DROVERS STATE BANK

Dec. 31	Balance	√	405	Dec. 31		J	405
				Jan. 1		√	405

Questions

1. Outline the process of verifying cash on hand. Cash in bank.
2. What are some of the methods employed to conceal defalcations?
3. Discuss the treatment of incidental items of shortage and overage. Give illustrative entries.
4. Under what conditions does interest accrued on bank balances become an unquestioned asset? To what account should such interest be charged?
5. "Under some conditions the special deductions made by the bank for handling checks represent a sales allowance." Explain.
6. Outline the proper treatment of an overdraft. Do outstanding checks, in excess of funds on deposit, not yet presented for payment by the drawees, represent an overdraft in the sense of a liability to the bank?
7. Present the case for and against the use of adjusting entries to cover the amount of outstanding checks.
8. Under what circumstances does the need for valuing or converting cash arise? What is the proper procedure?
9. What is the purpose of the bank reconciliation schedule? What is the principal reconciling factor in the typical case?

XXII

VALUATION AND AUDIT OF RECEIVABLES

Allowance for Bad Debts. As explained in Chapter XVII, periodic adjustment of revenues and receivables is necessary in connection with discounts, returns, special allowances, and uncollectible accounts. At this point the subject of bad debts requires further attention. In many lines this factor is the outstanding element in the valuation of customers' accounts and the measurement of the amount of revenue arising from credit sales. The open book account often proves to be uncollectible in whole or in part, and it is unwise for any enterprise in which receivables bulk large to ignore this fact.

There are two principal methods of estimating bad debts at the close of the period. First, all customers' balances may be appraised, one by one, and the accounts deemed bad or very doubtful written off in full or scaled down liberally. The second method consists of estimating and recognizing a blanket allowance based on experience. Under this plan individual accounts are later charged to the allowance as their worthlessness is demonstrated. A combination of these two approaches may also be employed. The first method is not inappropriate where accounts are few in number and of relatively large amount; the second is the more convenient and satisfactory when one is dealing with a large number of comparatively small balances. To appraise hundreds or perhaps thousands of individual accounts as of a particular date would evidently be a time-consumming and troublesome task. Further, apart from the day-to-day circumstances which facilitate the passing of judgment upon the particular account it is difficult to arrive at reasonable conclusions as to collectibility, regardless of the time and care devoted to the work. Some concerns make a partial use of the allowance method. That is, they write off all accounts at the close of each period which can be determined to be

uncollectible at that date, and in addition set up an allowance for doubtful accounts. This practice has some merit, although the complete use of the allowance plan is to be preferred in most cases.

The allowance method of dealing with uncollectibles may be applied to notes receivable, as well as to book accounts, particularly in the case of notes arising in the regular course of business.

Measuring Amount of Uncollectibles. In determining the percentage to be used in setting up the allowance the past experience of the particular concern and other companies in the same field (supplemented by judgments with respect to the trend of credit conditions in the immediate future) is the principal guide. The experience period employed should not be too long, as conditions with respect to volume of business, credit policies, discount practices, collection methods, etc. are subject to marked change over a relatively short time. Care should be taken in making the estimate to correlate past losses with the appropriate volume of business.

The volume of account sales is usually the proper base to which the estimated loss rate should be applied. Some authorities recommend the use of the total volume of business, both cash and credit, in this connection, but unless cash sales are of negligible amount the total sales base is not satisfactory. It is true that total sales is a figure readily available but the amount of credit business for any period can also be easily ascertained from the charges to accounts receivable. The balance of accounts receivable at the end of the period is even more unsatisfactory as a base figure on which to calculate the allowance for bad debts for the period. The balance outstanding fluctuates from period to period in terms of other factors than credit sales, and in the case of monthly reckonings some of the same charges may be represented in two or more successive balances. However, where the allowance is calculated on the basis of a segregation and study of doubtful and overdue accounts only, it may be expedient to work out a rate which can be applied directly to the total of questionable accounts outstanding in making the estimate.

Bad Debts—Interpretation of Charges. Assume that the account sales of the M Co. in a particular period amount to $100,000 and that 3% is determined to be the percentage of credit business which will presumably be uncollectible. The following adjusting entries should then be made at the close of the period:

Sales—Bad Debts Adjustment	$3,000	
Accounts Receivable—Allowance for Bad Debts. . .		$3,000

As indicated by the title used the charge for estimated bad debts can be viewed as an offset to gross sales, somewhat akin to discounts and allowances. This interpretation assumes that the management recognizes that a certain percentage of the total mass of book charges, without reference to individual balances, is uncollectible, and that the gross revenue figure recorded for credit sales is therefore tentative and subject to an adjustment. An alternative view, adopted by many accountants, considers such charges either as a financial expense applicable to the business as a whole or as a cost to be borne by the credits and collections department. The treatment of the item as a deduction from net earnings, current or past, a third possibility, assumes that all book accounts, at the outset, are good assets to the amount of their face value, and that any subsequent write-off without collection is a clear-cut loss. This interpretation is not appropriate where a systematic periodic allowance is made, but might be considered applicable to cases where accounts are written off directly when uncollectibility is established without preliminary adjustment.

If viewed as a sales adjustment, the estimate of bad debts applicable to the sales of the period should be reported in the income statement as indicated by the following:

Gross Sales	xxx
Less Estimated Uncollectibles (and other adjustments)	x
Net Sales	xxx

As in the case of returns, the estimated merchandise costs and other operating charges applicable to the sales from which bad debts emerge might be segregated and set up as a special loss, thus freeing the realizable sales from the burden of such costs. Such an analysis assumes that the true costs of effective revenues do not include the charges incurred which are not specifically recovered (at least in part) through collections. No doubt this interpretation of bad debt losses has merit. It focuses attention on the actual amount of loss from a cost standpoint and places the cost of sales on a more ideal basis, a point of special importance in making comparisons by departments and by periods. On the other hand it must be remembered that under prevailing conditions it is not practicable for any management,

however efficient, to avoid uncollectible accounts entirely; and there are other unfortunate features of business operation which result in higher costs than would prevail under more ideal circumstances. The question is, should accounts show operating costs as actually incurred or costs as they should be, ideally, all excess charges being treated as losses? The reasonable answer is that by accounting and statistical means all significant lines of analysis should be adequately explored, in so far as time and expense permit, but in defining losses for purposes of actual record it is necessary to recognize the inherent difficulties and limitations of the situation.

Nature and Treatment of Allowance Account. Assuming that the estimate has been carefully made the credit to the allowance account (often labeled "reserve for bad debts") can best be interpreted as an offset to the gross value of receivables. Further, the use of the special contra account, in lieu of a direct credit to the controlling account, is a technical necessity. The essence of the allowance method of handling bad debts is the substitution of a blanket estimate for immediate appraisal and adjustment of individual accounts, and since the amount of the allowance is not assignable to particular accounts until later it is not feasible to credit the control account at this point, as this would throw it out of harmony with the customers' ledger. The presentation in the position statement should be as follows:

Accounts Receivable—Gross Book Value	xxx	
Less Allowance for Bad Debts (and other adjustments) . . .	x	xxx

The allowance for bad debts should not show an accumulating credit balance as does the allowance for depreciation. If the balance is increasing from year to year (without an increase in the amount of credit business) this shows either that the percentage which is being used to determine bad debts is too high and should be adjusted, or that bad accounts are being carried that should be written off.

No doubt numerous cases may be found in practice where income has been understated through the establishment of an excessive allowance for bad debts. In this situation the allowance account reflects earnings in an undetermined amount—a form of "secret reserve." Where a condition of this sort becomes apparent the proper remedy is to transfer the amount of the allowance in excess of an adequate provision to retained earnings.

On the other hand, especially in small concerns, cases are probably

still more numerous where the allowance provided is inadequate and earnings are correspondingly overstated (or deficit understated). Here the ideal treatment consists of an adjustment by which retained earnings are charged and the allowance account credited in appropriate amount. A charge to retained earnings, to cover bad debts originating in an earlier period, is also required on the occasion of the establishment of the allowance method. The amount of an adjustment of the allowance in either direction should be reported in the income statement covering the year in which the correction is made.

In any event the retention of a moderate credit balance in the allowance, as a safety factor, is quite legitimate.

Appraisal of Specific Accounts. Even if a periodic adjustment is made on the basis of a blanket estimate the appraisal of the individual account must be undertaken if it is not collected within a reasonable period. In passing judgment on an account the important points to be considered include: (1) length of time account has run; (2) customer's practice with respect to discounts offered; (3) trend of the account; (4) rating of customer with recognized credit agencies. Perhaps the first point is the most important. Experience shows that the best evidence that the customer will not pay is found in his failure to pay within a reasonable length of time. The normal period for this purpose is the average time accounts actually run, without emphasizing nominal terms unduly. In making a general examination of receivables it is often helpful to prepare a schedule in which all delinquent accounts are classified according to length of time past due. This process is sometimes referred to as "aging" the accounts. In this connection a distinction must of course be made between a particular charge or bill and a balance resulting from a number of debits and credits. The discount practice is also significant, especially if the customer is a business organization. Failure to take discounts offered generally indicates poor financial management, an embarrassed financial position, or both. The trend of the account may be read from the entries themselves and is some indication of collectibility. If purchases are becoming larger and collections smaller and more tardy, to take an extreme case, a dangerous condition is indicated. Usually a customer's balance is good, doubtful, or bad in its entirety. However, partial collection may occur in

some cases, particularly where one or more of the charges involved is in dispute.

The process of ascertaining specific bad accounts should be systematically attended to, as time passes and circumstances arise which furnish a basis for judgment. Carrying worthless accounts on the books as good assets is bad practice, even if the balance in the allowance account is adequate. As soon as it appears clear that the prospect of collection is remote the responsible person or department should authorize the write-off.

Writing Off Bad Accounts. Assume that during a particular period accounts of certain customers of the M Co. amounting to $2,500 are considered to be uncollectible and are charged to the allowance account. The entries required are:

Accounts Receivable—Allowance for Bad Debts . . .	$2,500	
Accounts Receivable (also specific accounts). . . .		$2,500

By means of these entries the tentative estimated deduction from receivables in the amount of $2,500 is distributed or assigned to specific accounts and is also credited to the controlling account. That is, the provisional subtraction from assets which was set up in a special contra account is now canceled and credited, to the extent that it has been validated, to the primary accounts involved.

When an account is written off the proper sheet or sheets of the subsidiary ledger should be transferred to another book or file so that the full record may be maintained in connection with additional efforts to collect or later applications for credit. The elimination of the account from the active list does not in itself affect its legal status or warrant any change in attitude in dealing with the customer. In fact it is not necessary actually to credit the individual sheet provided it is pulled out of the live accounts and the controlling account is properly credited.

In many cases few if any accounts are written off as bad until the period following that in which the sales are made and recorded. Under this condition the charges to the allowance in a particular period are not represented by current accounts and if the allowance is adequate such charges will not exceed the credits previously established therein. Accordingly, at the close of any period, and just before the estimate of bad debts accruing currently has been recog-

nized, the allowance for bad debts should show a credit balance large enough to absorb accounts originating in earlier periods and still on the books, which may prove to be uncollectible. If the write-offs have exceeded the provisional credits, so that the allowance as it appears in the trial balance shows a debit rather than a credit balance, this indicates (assuming the write-offs to have been fully warranted) that the blanket estimates made in the past have been insufficient to take care of circumstances as they have developed and that the amount of this debit, therefore, is a correction of past earnings.

On the other hand, where the accounting period involved is the full year (or even several months) and writing off of very doubtful and definitely bad accounts is taken care of systematically and promptly, it will often happen that the recognition of an account as bad will antedate the setting up of the allowance. In this event the charge may still be to the allowance account, in anticipation of an adequate provision for bad debts at the close of the period, but some care must be taken in interpreting the balance of the allowance account, as it appears in the trial balance, under this condition. If the balance is a debit, and such debit does not exceed the amount of current accounts written off as bad during the period, no adjustment of past earnings is indicated; but if the debit balance includes the effect of writing off some accounts originating in an earlier period, a deficiency in the provision, chargeable to retained earnings, is apparent. If the balance remains a credit, notwithstanding the write-off of current accounts prior to the recognition of the estimated bad debts for the period, the provision made in the past would appear to be ample, especially if there has been no neglect in appraising and eliminating bad accounts. In no case should underestimates or overestimates of the past be covered up through the increase or decrease of the current adjustment. In other words, the income report of each period should contain an adjustment of revenue which is appropriate in view of the volume of credit sales and other pertinent conditions obtaining, regardless of the status of the allowance account just before the recognition of the current adjustment.

Recording Collection of Bad Accounts. The adjustments required if an account which has been written off as bad is later collected in whole or in part depend upon the circumstances. If the account is

collected in a period subsequent to that in which it was charged to the allowance the amount may be treated as a special income item. If collected in the period in which written off, but subsequent to the period in which sale occurred, the same disposition is usually recommended, although it is possible in this case to reverse the write-off entries, and then recognize collection in the usual manner, on the theory that the allowance was not intended to provide for the particular account involved and should therefore be adjusted. If sale, write-off, and collection all take place in one period a reversal of the write-off entries followed by ordinary collection entries would seem to be called for, on the ground that the particular account collected should not have been treated as bad and that the amount of the allowance needed is not affected by this transaction. Even in this case the charge to the allowance might be allowed to stand and the amount collected credited to a special income account, if the collection of the particular account could be viewed as a very unusual event, thus justifying the assumption that the allowance included a provision for the loss of this account.

To illustrate, assume that the amount of $300 is realized through legal proceedings on the account of the R Co. amounting to $1,000 and written off in full as a bad account in the preceding period. The general entries are:

Cash	$300	
Bad Debts Recovered		$300

The credit entry represents a special income item. No entry in accounts receivable is required, unless the write-off entries are reversed, but adequate notation should be made on the individual page or sheet, in the bad accounts file, so that the complete record will be available. If the recovery were made in the period in which the write-off occurred, and circumstances justified reversing the write-off entries in part, the following entries would be appropriate:

(1)

Accounts Receivable (also R Co.)	$300	
Accounts Receivable—Allowance for Bad Debts . . .		$300
To reverse write-off		

(2)

Cash	300	
Accounts Receivable (also R Co.)		300
To record collection		

In the administration of Federal income taxes bad debts recovered —and previously taken as a deduction, either directly or through the allowance method—are an item of taxable income.

Where the effort to collect bad accounts is viewed as a special activity, and substantial costs are involved, there is merit in the treatment of amounts recovered as revenues associated with such special costs, as by this means the worthwhileness of the activity may be judged.

Allowance for Collection Costs. The costs of handling and collecting receivables are obviously applicable to the sales through which the receivables originate. Such costs, however, are often incurred in part in a period succeeding that in which the revenues are recognized and again the need for an estimated adjustment arises. In this case there is much to be said for charging the estimated amount to an appropriate operating expense account each period, instead of treating it as a sales deduction, as costs of billing and collecting are charges which must be incurred more or less regularly by any concern doing business on a credit basis, and they are not in any sense an allowance or concession to customers. The objection to this is the general objection to the recognition of an operating cost before it is literally incurred either on a cost or liability basis.

The concurrent credit should be lodged in an allowance for billing and collection cost, and as expenditures are made in the following period this account is charged with the costs relating to receivables originating in the preceding period. As a matter of convenience all collection expenses incurred may be charged to the allowance until the amount is exhausted, additional costs of this character then being debited to the regular expense account.

The interpretation of the allowance account in this case is especially troublesome. It does not measure either a definite or a contingent reduction in amounts to be collected; it does not represent a sum, either definite or contingent, which is owing to customers or to other parties and hence is not a typical liability balance. The amount credited to the allowance, nevertheless, does reflect an estimate of a cost which it is expected must actually be incurred in the process of finally realizing, in cash, the revenues already recorded, and accordingly may be viewed as a valuation offset—in measuring the net realizable amount—to receivables.

For example, at the close of the first period of operation of the

M Co. it is estimated that billing and collection expenses will be required in connection with outstanding receivables in the amount of $200. With this condition the adjusting entries are:

Collection Expense	$200	
Allowance for Collection Expense		$200

In the following period the total amount of collection expense actually incurred is $1,000. In summary form the entries are:

Collection Expense	$800	
Allowance for Collection Expense	200	
Cash (or other appropriate accounts)		$1,000

At the end of the second period another adjustment is in order. And so on.

Under some accounting schemes, where an effort is made to apportion various classes of costs in terms of specific months or other short periods, operations are charged each period with estimated amounts, which are credited to "equalization reserves," and then all costs of the types involved are charged as incurred to the so-called reserve accounts. Evidently a procedure of this kind might appropriately be applied to an overlapping cost such as collection expense.

Use of Discounted Values. In the valuation of accounts receivable for statement purposes the standard treatment excludes all worthless accounts and accepts face value, less appropriate adjustments for bad debts, discounts, and other offsetting factors. A possible alternative basis of valuation is liquidation or discounted value, the cash value immediately realizable by discounting the accounts through some financing concern. This basis, however, is somewhat objectionable from the standpoint of the going concern which has no expectation of being obliged to sell or pledge its accounts for cash, especially in view of the fact that the "market" for open accounts is relatively undeveloped, and is not usually resorted to by enterprises in first-class financial condition.

The "discounted value" of an account receivable might be interpreted to mean the present value which would be obtained by discounting the sum which it is expected will finally be collected for the estimated period from date of valuation to date of collection, at a reasonable rate of interest. This basis is sound in theory and can be supported as a practical measure in the case of notes and bonds, but it cannot be conveniently applied to ordinary book accounts.

The life of the individual account cannot be determined with precision, the rate of discount used would be more or less arbitrary, and the adjustment would usually be for a relatively small amount. On the other hand special statistical studies designed to disclose the interest element implicit in book accounts, both receivable and payable, should be made from time to time, especially when a change in credit policies is under consideration.

Audit of Receivables. The periodic verification of receivables is facilitated where the regular routine for handling credit sales and collections is effectively developed. In all cases, however, the auditor must satisfy himself as to the accuracy and adequacy of the regular work, and this involves, at the least, a judicious sampling or "spot-checking." Verification of charges to customers commonly takes the form of a comparison of ledger entries with invoices or other underlying documents. Where a limited verification discloses evidences of irregularity in handling invoices (if, for example, bills have been drawn and posted in advance of shipment, have been made out for wrong amounts, or have been charged to imaginary customers) a more complete audit must be undertaken. Credit entries representing collections can be audited by comparison with the records of cash receipts, and credits representing returns, allowances, etc. can be checked against invoice terms, credit memoranda, and correspondence covering claims. Special attention should be directed to credits covering payments received in other than cash form (notes, for example) and credits for bad debts. A common form of embezzlement is the abstraction of collections on account, and alteration or suppression of entries is often found in this connection. Disclosure of such conditions often requires all the auditor's care and resourcefulness. In many cases the auditor will find it necessary to enter into direct communication with some—or all—customers, for the purpose of having them verify statements drawn from the books or submit statements of their own preparation.

The auditor should see to it that all questionable receivables, such as goods shipped on consignment, approval sales, etc. are excluded or segregated. In summarizing for statement purposes there should be no cancellation of liabilities, such as advances by certain customers, against accounts receivable. Such receivables as amounts due from employees and advances to subsidiary companies should receive special attention and should be segregated, or commented

upon, in statement presentation. Testing the adequacy of the allowance for bad debts and other adjustments of receivables should also be deemed to fall within the range of the public auditor's duties.

See comments on audit of notes receivable in the next chapter.

Illustrative Problem. The Wills Co. begins business as of January 1, 1943. The record of credit sales, collections, and bad accounts written off for the next six years is as follows:

Year	Credit Sales	Collections	Write-offs
1943	$ 50,000	$ 45,000	.....
1944	60,000	58,000	1,500
1945	75,000	76,000	2,000
1946	120,000	110,000	1,000
1947	150,000	140,000	500
1948	160,000	165,000	1,500

During 1949 credit sales amount to $145,000, collections total $144,000, and accounts written off as worthless during the year amount to $500. For the entire period 1943–1949 recoveries made on accounts written off have totaled only $300, an amount more than offset by special collection costs.

At this point, before the books have been closed for the year, it is decided to establish the allowance method of dealing with bad debts. It is also decided to use the experience of the period 1946–1948 as a basis. As a first step the outstanding receivables are classified according to age, as follows:

Period on the books	Amount
Originating prior to 1948	$ .....
Over one year	3,000
Over six months and less than twelve	1,000
Over two months and less than six	1,000
Less than two months	10,000
	$15,000

With respect to the bad debts written off in the period 1946–1949, a total of $3,500, it is found that accounts originating prior to 1946 are included in the amount of $1,900. It is also found that of the accounts written off in 1949 all originated in earlier years. As to the accounts now on the books it is concluded that all charges outstanding for more than a year should be written off, that there are definitely worthless accounts included in charges of over six months and less than one year amounting to $500, and that of the charges of the last six months accounts which should be written off total another $500. The final losses to be correlated with the credit business of the period 1946–1948, accordingly, are computed as follows:

Total written off 1946–1948	$3,500	
Less amount applicable to period 1943–1945	1,900	$1,600
Balance to be written off		3,000
		$4,600

Applying this figure to the credit business for the period 1946–1948, $430,000, gives a percentage of approximately 1.07.

On the basis of this analysis it is decided to adopt for the time being a rate of 1.1% of credit business to measure uncollectibles. The necessary entries to establish the allowance for the year 1949 are therefore as follows:

Sales—Bad Debts Adjustment	$1,595	
Accounts Receivable—Allowance for Bad Debts . . .		$1,595

Of the write-offs made at this time the amount of $3,000 is chargeable to retained earnings (or to a special loss account) and the balance is chargeable to the allowance:

Retained Earnings	$3,000	
Accounts Receivable—Allowance for Bad Debts. . . .	1,000	
Accounts Receivable.		$4,000

After these entries have been posted the controlling account for the customers' ledger and the allowance account for 1949 will appear—in summary form, and after final balancing and ruling—as shown below.

ACCOUNTS RECEIVABLE

1949						1949					
Jan.	1	Balance	√	14,500	00	Jan.	1–	Dec. 31	RJ	144,000	00
Jan.	1–	Dec. 31	SJ	145,000	00	Jan.	1–	Dec. 31	J	500	00
						Dec.	31		J	4,000	00
							31	Balance	√	11,000	00
				159,500	00					159,500	00
1950											
Jan.	1	Balance	√	11,000	00						

ACCOUNTS RECEIVABLE—ALLOWANCE FOR BAD DEBTS

1949						1949					
Dec.	31		J	1,000	00	Dec.	31		J	1,595	00
	31	Balance	√	595	00						
				1,595	00					1,595	00
						1950					
						Jan.	1	Balance	√	595	00

To continue the example for another period, assume that in 1950 credit sales total $130,000 and collections $128,000. Assume, further, that worthless accounts written off during the year amount to $950. In summary journal form the entries during the year are as follows:

(1)

Accounts Receivable	$130,000	
Sales		$130,000
To record sales		

(2)

Cash.	128,000	
Accounts Receivable		128,000
To record collections		

(3)

Accounts Receivable—Allowance for Bad Debts . .	950	
Accounts Receivable		950
To record writing off of accounts		

At the end of the year it is decided to apply the same rate, 1.1%, in measuring the uncollectibles in the year's business. It is also decided that additional accounts amounting to $450 should be written off. The necessary entries are:

(1)

Sales—Bad Debts Adjustment	$1,430	
Accounts Receivable—Allowance for Bad Debts. . .		$1,430
To set up allowance for uncollectibles for the year		

(2)

Accounts Receivable—Allowance for Bad Debts . . .	450	
Accounts Receivable		450
To record year-end write-offs		

The credit balance in the allowance account at this point stands at $625, a slight increase over the balance of December 31, 1949, notwithstanding the decline in the volume of credit business. No occasion for a special adjustment is indicated, however, as the allowance account may properly include a reasonable safety factor.

Questions

1. Outline the allowance method of recognizing and apportioning uncollectible accounts. Indicate its special advantages over the principal alternative method.

2. How should the percentage of uncollectibles be determined?

3. To which of the following bases should the percentage of uncollectibles be applied: (a) balance of receivables outstanding at the close of the period; (b) account sales; (c) all sales on a credit basis; (d) total sales? Explain.

4. List and discuss the principal alternative treatments for the charge representing estimated uncollectibles for the period.

5. Is it proper to charge credit sales which are collectible with costs of sales which prove to be uncollectible?

6. What is the nature of the allowance for bad debts? Why is such an account a technical necessity? How should it be presented in the position statement?

7. Under what circumstances may the allowance for uncollectibles properly show a debit balance in the trial balance? Contrast the allowance for uncollectibles and the allowance for depreciation.

8. What are the principal factors to be considered in appraising specific customers' accounts?

9. Outline the procedure to be followed in writing off bad accounts, and indicate the proper interpretation for each of the following general situations: (a) write-off in period in which the account originated, and prior to recognition of allowance; (b) write-off in period following that of sale.

10. Outline the procedure to be followed in connection with the collection of accounts previously written off as worthless and discuss each of the following situations: (a) collection in period following write-off, assuming sale to have occurred in a still earlier period; (b) collection in same period as sale and write-off.

11. Why is an allowance for collection cost an account difficult to interpret?

12. Why is immediate realizable value a questionable basis for the valuation of book accounts? With illustrative entries show how the implicit interest element in ordinary accounts might be estimated and brought to light.

13. Outline an audit program covering the accounts receivable of a department store.

XXIII

NOTES RECEIVABLE AND PAYABLE

Commercial Paper—Types and Characteristics. There are two main classes of "commercial paper" commonly used in business: (1) promissory notes; (2) bills of exchange. The ordinary promissory note is a written contract between two parties, the maker and the payee, under which the former unconditionally agrees to pay to the latter (or his order) a stated or determinable amount on a specified date. As indicated by the illustrative forms on page 445 the instrument regularly covers date drawn, name of payee, amount, due date (or statement of period of days, months, or years from date drawn), interest rate, signature of maker. Place at which drawn and place of payment are also sometimes named in the document. The conventional phrase "for value received" is not required to insure validity or negotiability. In special cases notes are payable to bearer. (Coupon bonds are essentially long-term notes of this type.) Where no time is specified the instrument is deemed to be payable on demand. Notes may be "unsecured," in which case they have substantially the same legal status as the ordinary book account, or they may be specifically secured by the deposit of collateral, by the execution of a mortgage on real or personal property, or in some other manner. To be fully negotiable a note must be payable to the order of the specified party or to bearer.

The bill of exchange is a written order prepared and signed by the maker (drawer) directing another party (the drawee) to pay to himself (the maker), to his order, to a specified third party, or to bearer, on demand or "sight," or at a fixed or determinable date, a stated sum. The term includes commercial drafts and acceptances, and bank drafts and acceptances. Ordinary checks drawn on bank accounts are a type of demand bill, although usually viewed as cash

for accounting purposes. Time bills or drafts, which may or may not bear explicit interest, are closely allied to promissory notes, especially where payable to the maker or drawer. All bills of exchange, how-

Ann Arbor, Mich.__________, 19___ $______

__________after date for value received the undersigned promises to pay to the

STATE SAVINGS BANK OF ANN ARBOR or order

__________Dollars

at said Bank in Ann Arbor, Michigan, with interest at the annual rate of_____per cent. after date, having deposited and hereby pledging with said bank as collateral security for the payment of this note and all other liabilities, absolute or contingent, present or future, several or otherwise, of the undersigned, to said bank, whether said bank shall be an original or a subsequent party thereto, the following property:

Said Bank is hereby granted a lien for security as aforesaid on all property of the undersigned at any time, whether before or after payment in full hereof, in possession or custody of said bank for any purpose and is hereby authorized, on default in payment of any of said liabilities or thereafter, at its option, to sell, with or without notice at public or private sale, all or any part of said property, to purchase at such sale and to apply the proceeds after deducting all expenses of collection and sale, in such order of priority as said bank shall elect, in part or full payment of any of said liabilities, whether due or not.

If the security afforded by said property, shall, in the sole opinion of said bank, be insufficient, said bank may without notice to any party hereto declare the principal of this note due and payable forthwith and enforce the security as aforesaid.

The bank is also hereby granted a lien on all balances of deposit accounts and other liabilities owing at any time by said bank to any one or more of the undersigned, as security as aforesaid, and the bank may apply all or any part of the same at any time in part or full payment of any of said liabilities, whether due or not.

Said bank is authorized to cause said collateral or any part thereof to be transferred to or registered in its name, or the name of any other person, firm, or corporation, with or without designation as pledgee or nominee of pledgee, or other reference hereto. Any collateral subject hereto may be delivered to any transferee hereof and said bank shall be under no further responsibility therefor, and such transferee shall thereupon become vested with all the rights and powers above given to said bank in respect thereto.

If signed by two or more (whether by all as makers, or by one or more as an accommodation party), the obligation hereunder and each grant of lien hereby made shall be that of all and of any two or more jointly and each severally.

Each endorser hereof hereby waives presentment, demand, protest and notice and agrees that he shall not be discharged because of any extension or indulgence granted any of the undersigned or the release or substitution of all or any part of said collateral. Enforcement or preservation of any lien hereunder, or otherwise held, or liability of any party hereto or to any guaranty or other undertaking are hereby waived by the undersigned and each endorser, original or subsequent, and the holder hereof may deal with any such lien or liability as if there were no other party hereto.

I/We acknowledge that we have fully read the foregoing.

Address__________

Due__________

ANN ARBOR, MICH.,__________194___ $______

__________AFTER DATE______PROMISE TO PAY TO THE ORDER OF

THE STATE SAVINGS BANK, ANN ARBOR, MICHIGAN

__________DOLLARS

AT THE STATE SAVINGS BANK, ANN ARBOR, MICH., VALUE RECEIVED, WITH INTEREST AT______

PER ANNUM FROM__________

P. O. ADDRESS__________

DUE__________

ever, have the distinctive feature of being "orders" to pay rather than "promises" to pay; the vendor (or creditor under other circumstances) initiates settlement by "billing" or "drawing upon" the buyer (or debtor under other circumstances), thereby instructing him to

make payment. Bills arising in domestic business are usually referred to as "drafts," the term "bill of exchange" being applied particularly to instruments arising in connection with foreign commerce. To become binding a bill must be "accepted" by the drawee. Acceptance often is accomplished by writing the term "accepted," the date, and the signature of the drawee, across the face of the bill.

An important feature of notes and bills as compared with book accounts is their high degree of negotiability or transferability. This feature makes it possible for banks and other financial institutions to facilitate the purchase and sale of goods by advancing funds based on commercial paper. Where instruments are payable to bearer negotiation can be accomplished by physical delivery, as in the case of money itself; where they are payable to order of a particular party complete negotiation requires a proper form of indorsement. A complete or "blank" indorsement is usually accomplished by writing the signature of the indorser, without additional words, on the back of the instrument. In the "qualified" indorsement, which passes title without making the indorser liable, the words "without recourse" are usually added. Under some circumstances commercial paper is transferred by assignment, without full negotiation.

Origins and Uses of Commercial Paper. Promissory notes originate for the most part in three ways: (1) through the purchase or sale of merchandise or other assets; (2) in the settlement of book accounts; (3) in loaning or borrowing funds for either temporary or long-term purposes. Purchases and sales in whole or in part "on note" rather than on account are especially common where the cost per unit is relatively high, as in the case of agricultural implements, motor cars, factory machines, office equipment, household furniture and appliances, and other equipment lines. Notes also frequently arise where large aggregates of materials or merchandise change hands at one time. The customer usually makes a more or less substantial down payment and gives one or more notes for the balance. Such notes regularly bear interest and run for from two months to a year—occasionally longer. A closely allied situation is found in the real estate field, where secured notes are employed in financing the transfer of subdivision lots and other parcels of property.

Notes are seldom given to meet open accounts except where the account is past due and the debtor is finding it difficult to make payment, and notes arising under these circumstances are naturally none

too secure. The execution of a note to cover a book account, however, does serve as a further acknowledgment of the obligation, sets a definite date for payment, usually introduces the factor of interest, and makes a negotiable instrument available to the creditor. Occasionally the debtor on account delivers a note in settlement made by some other party, and such a note may be substantially the equivalent of cash.

An important activity in the banking field is the making of commercial loans, through both secured and unsecured notes, to finance merchandising and other transactions and to meet the seasonal needs of business concerns for additional working capital. Enterprises in other lines frequently borrow funds on note, for long as well as for short terms, and from other sources as well as from banks, but are not in the business of loaning money to others. However, business concerns do sometimes make accommodation and other loans to stockholders and officers, which are evidenced by notes, and substantial advances to affiliated and subsidiary companies, usually covered by notes, are not uncommon. Not infrequently, too, a company invests idle funds in notes and similar securities issued by other corporations or governmental units.

Commercial bills or drafts originate largely in merchandising transactions. To illustrate the general circumstances, assume that the M Co. in Chicago makes a sale to the R Co. in Detroit, and it is agreed (or understood) between the parties that the M Co. may draw upon the R Co. by means of a thirty-day draft, the same to be forwarded upon consignment. The vendor delivers the merchandise to the railway company, and mails the draft, with invoice and bill of lading, to the R Co. The draft may be drawn payable directly to the M Co., to a representative, or to a distinct third party. The buyer accepts the draft and returns the accepted instrument to the drawer. The M Co. now has a valid receivable, with the same legal status as a promissory note, which may be held to maturity or negotiated, as desired. Neither the nature of the transaction or of the instrument used would be changed in any substantial way if the M Co. forwarded the draft and bill of lading through its Chicago bank to the R Co.'s bank in Detroit with instructions to deliver the bill of lading to the vendee upon acceptance of the draft, and then to hold the draft for collection, although the use of banking channels would be a safeguard in that it would tend to insure prompt acceptance by the drawee.

In some cases goods are shipped under an arrangement which re-

NOTES RECEIVABLE

Date Received	Date Made	Date Due	Term	Rate %	Maker	Indorser	Customer
1/6/49	1/3/49	3/4/49	60 das.	6	R. E. Bond		R. E. Bond
1/8/49	1/8/49	2/7/49	30 das.	6	E. O. Head		E. O. Head
1/20/49	12/20/48	6/20/49	6 mos.	6	S. L. Snow	F. B. Goss	F. B Goss

quires the buyer to accept and pay the draft drawn by the vendor in order to secure possession. Such a transaction is essentially a c.o.d. sale.

Bookkeeping Procedure. Where notes and time bills originate through sales the principal documentary basis for the charge to receivables on the vendor's books is the audited invoice, as in the case of sales on account. If the note or bill is received immediately upon consignment or delivery, or very shortly thereafter, the appropriate information may be listed on the invoice or an attached memorandum, and the original charge may be made directly to notes or bills receivable instead of to accounts receivable. In many situations, however, it is more convenient to break the transaction into two parts for purposes of record: (1) sale on account; (2) receipt of note or accepted draft to replace the open book charge. The first step is then handled like any other charge sale; the second requires the use of a special journalizing medium and—where such transactions are very numerous—the preparation of slips or vouchers from which the credits to the individual customers' accounts may be derived. Under this procedure a complete record of all charges appears in the customer's individual account, and control and audit of the entire transaction is facilitated.

Essential details such as dates, amounts, interest rates, names of makers and indorsers, collateral, etc. appear on the instruments themselves and hence a complete file or portfolio of notes receivable constitutes in effect a subsidiary ledger lying back of the controlling account or accounts. Notes and bills, however, are valuable documents, and can scarcely be left in an ordinary office file. Further, discounted or pledged paper, no longer in the possession of the

REGISTER

LF	Notes Receivable	Accounts Receivable	LF	Accounts	General Ledger Dr.	General Ledger Cr.	Disposition Date	Disposition Proceeds	Disposition Memo
14	500 00	500 00					3/4/49	505 00	Collected
28	1,000 00	1,000 00					2/7/49	1,005 00	Collected
20	1,000 00	1,005 00	38	Int. Acc. Rec.	5 00		2/20/49	1,009 40	Discounted
	22,400 00	22,050 00			50 00	400 00			
	(45)	(40)							

original holder, must still be accounted for on his books. It is necessary, therefore, that a subsidiary ledger be maintained in which are continuously displayed all data with respect to each note or bill and each debtor involved. Such a record may be in the form of a file of cards or sheets similar to a typical customers' ledger (see discussion of bank's methods, next section). Or it may be a chronological note or bill register, with one horizontal line devoted to each note, as in the illustration on this and the next page. The register may serve purely as a subsidiary ledger or it may be used both as journal and ledger. If restricted to the ledger function the entries to the ledger accounts may be secured through general journal, sales records, and other media.

The example given assumes that notes and bills received are primarily furnished by customers and that in booking the sales invoice the customer's account is regularly charged, in accordance with the procedure just outlined. It also assumes that the credits to the individual accounts will be posted from this book rather than from separate vouchers or memoranda. The collection or discounting of the instrument is journalized through the cash records and is recorded in the note register in memorandum form. The writing off of dishonored and uncollectible paper would likewise be recorded only in memo in the register, the entries for the accounts being secured through the general journal. The general-ledger columns included in the example are to take care of notes originating otherwise than through credit sales or to provide a means of recording special adjustments such as interest already accrued when notes are received. Adjustments for accrued interest may of course be handled through the general journal. A more elaborate form of record for each in-

strument than the single line may be needed in some situations. Where notes are payable on the installment plan, for example, the use of a special sheet for each note is expedient.

The procedure required in handling notes from the standpoint of the books of the creditor or payee can be readily adapted to the needs of the debtor or payor.

Where notes and bills handled are numerous it is important that a definite system be worked out which will insure that prompt attention be given to each instrument as it comes due. In some cases the note register is arranged by months or weeks of maturity, one or more pages being reserved for each period, and thus serves as a form of note tickler. When this is done, and notes are entered by maturity periods rather than dates of receipt, the use of the book as a posting medium requires the preparation of a summary of entries on all pages to secure the total for entry in the controlling accounts. For most situations the use of some special book or device as a tickler is to be recommended.

If desired, drafts and acceptances receivable or payable may be separated from promissory notes both in the general-ledger accounts and in the underlying records, although there is no material difference between the two types of paper for accounting purposes. It is also sometimes recommended that notes and drafts arising in merchandising and other regular commercial transactions be segregated from stockholders' and employees' notes, and notes representing loans to associated companies. Another line of division which may well receive some ledger recognition is found in the distinction between secured and unsecured paper. A special account may also be used to cover notes assigned or pledged, although in this case a notation in the note register, and proper comment in connection with statement presentation, may suffice. In all cases long-term and short-term notes should be distinguished, in the financial statement if not in the ledger records.

Loans and Discounts in Bank Accounting. Banks regularly make use of a "loans and discounts" register, a bound or loose-leaf book roughly similar to the notes receivable register illustrated above, and when a note or bill is received it is assigned a number and recorded in this book. If the borrower is a depositor a credit ticket or deposit slip is prepared for the amount of the net proceeds and his

deposit account is credited, and even if the borrower has had no account with the bank up to this point a checking account for the amount of the loan is often opened. If the proceeds are immediately paid to the borrower in cash the amount may be credited directly to cash instead of being passed through a deposit account. The register sheet is totaled daily and the total face or maturity value of the loans, under the usual procedure, is charged to "loans and discounts" in the general ledger. The treatment of the discounts and other charges deducted, if any, is discussed in the next chapter.

It should be explained that the term "loans" in banking practice refers to direct loans made, without deductions, and usually secured by collateral or otherwise, on which interest is charged at a specified rate. The term "discounts" refers to notes or bills arising in commercial transactions, and usually secured only by indorsement or acceptance, which are "purchased" or discounted by the bank, the amount of the discount being deducted from the sum due at maturity in determining the net proceeds or price.

An important element in the bank's accounting for commercial paper is the "liability" ledger. This is a record (usually in the form of a file of sheets or cards) which shows all loans made to each person, firm, or corporation. In addition to this "direct" liability ledger the bank may also maintain an "indirect" ledger record for the purpose of showing all endorsements or other guaranties. This secondary record may be in the form of separate cards, under indorsers' names, filed with the direct liability cards. In some institutions a combination type of card or sheet is kept, for the purpose of showing the total amount of liability carried, direct and indirect, under each name.

In order that maturities may be brought to attention on the proper dates all notes and bills are recorded in a tickler, a bound or looseleaf book containing one page or section for each business day. The entries in the tickler should be made promptly when the notes are received and should describe each loan or discount in adequate detail. Under this plan a complete list of paper maturing on each day is available when the corresponding date is reached or is approached. In some cases the notices of maturity to be sent to borrowers or indorsers are written up when the loans are made and filed according to due dates and notice dates.

Under some systems the entries on the note register, the liability

ledger cards, and the tickler sheet are all posted by machine in one operation. In large institutions a distinct set of records may be employed for each main class of commercial paper handled.

The actual notes and bills are filed by maturity dates (or, in some cases, by makers' names and other classifications). A few days before maturity the paper coming due is transferred to the collection department for attention. The loans and discounts account is credited with daily collections, proper entries being made for interest and discount. When paper is past due it is placed in a special file for the attention of those charged with pushing collection of such items. Where maker or acceptor fails to make payment when due, or within a reasonable time thereafter, necessary technical steps to hold indorser or drawer must be taken. The renewal of a note is commonly treated by the bank as a collection followed by the issue of a new note, but a complete record of renewals is maintained in the account of the customer in the liability ledger.

In the handling of loans based on collateral such as stocks and bonds, the collateral must be filed in envelopes under customers' names and must be carefully controlled and safeguarded at all points. Under one plan the note itself includes a collateral agreement with space for listing the securities or other assets deposited. Under a second method the ordinary form of note is used and a separate agreement is executed covering the deposit of collateral. An essential problem of procedure in handling loans secured by marketable securities is that resulting from the necessity of following market values in terms of particular loans. The liability ledger in this situation should emphasize each loan and the applicable collateral. Further, to facilitate the watching of security prices and to assist in avoiding dangerous commitments a record should be maintained which shows all collateral held classified by particular issues and types of securities.

This discussion of the handling of loans and discounts by banks by no means represents a complete description of typical bank routine in this connection; it is intended merely to call attention to some of the principal features of typical procedure.

Recording Notes Receivable—Illustrative Entries. Assume that the Weed Motor Sales Co. sells a car to L. V. Dodd at a price of $2,000 and that the customer pays $1,200 in cash and gives his ninety-day

note at 6% for the balance. The general-ledger entries on the vendor's books are as follows:

Cash	$1,200	
Notes Receivable	800	
Sales of New Cars		$2,000

As has been indicated, it would also be necessary for the vendor to record the details of the note in some form of subsidiary ledger. In this example it is assumed to be expedient to charge notes receivable and cash directly instead of passing the amount of the sale through the customer's individual account.

If Dodd's note is collected with interest at maturity, and the entire transaction is recorded within a single accounting period, the suitable entries on the date of collection are:

Cash	$812	
Notes Receivable		$800
Interest Revenue		12

(See discussion later in this chapter relative to calculation of interest.) Appropriate entries would also be required in the note register.

For a second example assume that the M Co. makes a sale of merchandise to the R Co., the amount of the invoice being $1,000, and that the merchandise is consigned and the sale recorded prior to the receipt of a sixty-day, 6% note from the R Co. covering the purchase price. The entries covering sale are:

Accounts Receivable (also R Co.)	$1,000	
Sales		$1,000

When the note is received the proper entries are:

Notes Receivable (also note register)	$1,000	
Accounts Receivable (also R Co.)		$1,000

If the R Co.'s note were dated prior to the date of receipt and record an element of accrued interest would be involved. However, unless the R Co. were given credit for more than the face of the note the recognition of the accrual might be postponed until the regular time for making such calculations.

Recording Notes Payable—Illustrative Entries. In the example given above the required entries on Dodd's books, when the car is acquired from the Weed Motor Sales Co., are as follows:

Motor Equipment	$2,000	
Cash		$1,200
Notes Payable		800

When the note is paid, assuming again that the entire transaction is completed within a single accounting period, the entries are:

Notes Payable	$800	
Interest Charges	12	
Bank		$812

Borrowing from the bank is the most common origin of notes payable for many business concerns. The M Co., for example, borrows $5,000 from its bank, giving its 6% note for 90 days. Assuming that the amount of the loan is credited by the bank to the Company's deposit account, the entries representing the transaction on the borrower's books are:

Bank	$5,000	
Notes Payable		$5,000

(Or, if desired, cash may first be debited and then credited as in the case of ordinary receipts and deposits.) If the M Co. pays the note in full at maturity, and assuming that only one accounting period is involved, the entries recording payment are:

Notes Payable	$5,000	
Interest Charges	75	
Bank		$5,075

Where the borrower deposits collateral as security for the loan a memorandum record should be made which shows the amount and character of such collateral. The bonds or other assets represented remain the property of the borrower; it is only necessary to indicate in some manner in the records and in the statements the fact that they have been pledged, and this may or may not be considered to require definite segregation in the accounts.

All details of notes payable should be entered in the notes payable register or other suitable subsidiary record.

Calculation of Interest. The period of a note is usually stated in days, months, or years. In determining due dates and precise intervals involved it is convenient to assume that the instrument is drawn or issued at the close of business on the initial date and is payable at the close of business on the due date. In other words, the

day of drawing is excluded from the interest-bearing term of the note while the day of maturity is included. For example, a note dated July 1 and payable thirty days from date is due at the close of business July 31. Where the term is expressed in months, likewise, the due date in the maturity month corresponds to date of issue in the issue month. Thus a note dated June 15 and due one month from date is payable on July 15. Similarly a one-year note dated June 1 is due on June 1 of the following year. A note which matures on a holiday or on Sunday is legally due the following day, and interest for the additional day may be charged.

Unless definitely stated to the contrary in the contract the expressed rate is an annual rate and must be adjusted in calculations involving a period of either more or less than one year. The fraction of the year to be used is usually determined in one of two ways. Under one method the year is treated as 365 days and the exact number of days in the term of the note, whether it be stated in days or in months, is taken as the numerator and 365 as the denominator of the required fraction. Under the alternative plan, the year is assumed for convenience to contain 360 days and each month to represent one-twelfth of a year, and the number of days in the term of the note (where expressed in days) is taken as the numerator and 360 as the denominator of the required fraction, and the number of months in the term of the note (where expressed in months) is taken as the numerator and the number 12 as the denominator. The next step consists in multiplying the stated rate by the fraction of a year involved, and the final step is the application of the adjusted rate to the principal or face amount of the note. To illustrate the first method, the adjusted interest rate on a 60-day, 6% note is 60/365 of 6%, or approximately .009863, and the adjusted rate on a note dated June 1 and due August 1 is 61/365 of 6%, or approximately .0100274. To illustrate the second method, the adjusted interest rate on a 60-day, 6% note is 60/360 of 6%, or 1%, and the adjusted rate on a note stated to be due in two months from date of issue is 2/12 (60/360) of 6%, likewise 1%. For convenience the second plan is used throughout the discussion and illustrative calculations in this book, unless definitely indicated to the contrary.

Often the most satisfactory calculation procedure is to apply the stated rate per annum to the principal or face amount and multiply the resulting annual interest by the fraction of a year involved. For example, on December 31, at the end of an accounting period, it is

desired to find the accrued interest on a 6% note for $1,100 made July 5 in the current year and due January 5 in the following year. Using the first or exact-days method the period that the note has run is 179/365 of a year and the interest for this period is 179/365 of $66, the annual interest, or $32.37. Treating all months as having thirty days the period the note has run is 5 25/30 months or 175/360 of a year and the amount accrued is $32.08.

Where calculations are being made without the aid of machines the arithmetical process may often be abridged somewhat by using the so-called 6% rule (in conjunction with the second method explained above). Interest for sixty days at 6% per annum is equivalent to 1% of the principal; interest for thirty days is one-half of 1% or .005; interest for six days is 10% of 1%; interest for one day is found by dividing interest for six days by six. If the stated annual rate is more or less than 6%, the 6% rule as indicated may still be helpful in some circumstances. For example: 2% is one-third of 6%; 3% is one-half of 6%; to find 4% subtract one-third from 6%; to find 5% subtract one-sixth; to find 7% add one-sixth; to find 8% add one-third; to find 2½% calculate 5% as indicated and divide by two; to find 3½% calculate 7% as indicated and divide by two. It should be borne in mind that "shortcuts" of this nature have their limitations and are justified only where they involve a distinct saving in time and energy over more direct calculations.

Treatment of Accrued Interest. Interest is the amount paid or received on a time contract, during its life, in excess of the true initial principal. In the case of the ordinary note contract, the face or stated amount constitutes the principal and the interest is calculated by applying the stated rate thereto, for the proper time interval, as has been explained. The interest element, like the principal, is due only at the date or dates specified. In the case of the short-term note there is only one maturity date and the full amount of both interest and principal is due on that date. Short-term notes, however, are usually payable on or before the specified date, and if the note is collected before the maturity date the interest is based on the elapsed time rather than the total term.

Interest, being the payment for the use of money in terms of time, may be said to accrue as time passes, and this process of accrual, in the usual interpretation, affects both asset values and revenue (or, in the case of notes payable, liabilities and income charges). The

accrual of interest, ideally, should be registered daily in the accounts. This, however, is not feasible for most enterprises. As a rule it is sufficient if the precise effect of each contract involving interest is recorded at the close of each accounting period, no interim accounting for interest accumulation being undertaken. In addition, accruals must be taken into account when notes are received and booked some time after the date of issue and an allowance has been made for interest in the terms agreed upon between the parties.

The charge to interest receivable represents the increase in the book value of the note due to the lapse of time and constitutes a legitimate current asset. The credit to interest revenue represents an accrued earning, not realized in cash but backed by good receivables and hence worthy of recognition. The interest receivable is an asset closely akin to the principal receivable. The single document, in fact, includes the promise to pay interest as well as principal. The question arises, then, why use the special receivable account? Why not charge interest accrued directly to notes receivable? The answer is that the use of the separate account is an established tradition, and that in the case of long-term contracts the practice has a special justification in that part of the total interest is due before the date on which the principal is collectible and hence is a more current asset than the principal. However, there is nothing essentially unsound in the inclusion of accrued interest in the main account and the standard practice of recording discounted paper does not involve the use of a separate account for interest receivable or payable.

The accrued interest on each note may be listed in memorandum form in the note register if space therefor is provided. Otherwise a special schedule of accruals by individual notes, supporting the charge to interest receivable, must be prepared and kept on file. The formal entries are usually recognized through the general journal.

In accruing interest receivable or payable a distinction is sometimes drawn between interest accrued which is due at some future date and interest accrued which is immediately receivable or payable. If desired a special title, "interest matured receivable," may be applied to interest due. The distinction is hardly of sufficient importance to deserve formal recognition in the ledger but may be of some significance in statement presentation.

Recording Accrued Interest—Illustrative Entries. For a first illustration of the entries required the example employed in the above

discussion of interest calculation may be used. The entries recognizing the accrued interest on December 31 on the payee's books are:

Interest Accrued Receivable	$32.08	
Interest Revenue		$32.08

Assuming that the note on which the above accrual is recognized is collected at maturity, January 5, the appropriate entries on the payee's books are:

Cash	$1,133.00	
Notes Receivable		$1,100.00
Interest Accrued Receivable		32.08
Interest Revenue		.92

Under this treatment the second year is credited with interest to the amount of 92 cents, the balance of the interest received representing the collection of the accrued receivable recognized at the close of the preceding period. This distribution is obtained by finding the interest on $1,100 for six months at 6%, and deducting therefrom the amount previously accrued. The entries under the exact-days procedure would of course be somewhat different.

An alternative procedure on January 5 would be to make a preliminary adjustment, charging interest receivable with 92 cents and crediting interest revenue with the same amount, the collection of the note then being recorded purely as the collection of receivables. The use of this procedure has the nominal advantage of recognizing all interest accruing during the life of the note as an asset on the books.

Referring to the payor's books, and using the same example with a period of the calendar year, the proper entries on December 31 are:

Interest Charges	$32.08	
Interest Accrued Payable		$32.08

When payment is made the appropriate entries are as follows:

Notes Payable	$1,100.00	
Interest Accrued Payable	32.08	
Interest Charges	.92	
Bank		$1,133.00

To illustrate the situation in which accrued interest must be booked when a note is received or delivered assume that the M Co.

on June 1 makes a sale on account to the R Co. amounting to $1,500, the account being due in thirty days, and that on July 1 the R Co. delivers to the M Co., properly endorsed, a 60-day, 6% note made by K, a customer of the R Co., amounting to $1,200, the note being dated on June 25, and a check for $298.80, in settlement of the account. The entries on the M Co.'s books on July 1 are:

Cash	$ 298.80	
Notes Receivable	1,200.00	
Interest Accrued Receivable	1.20	
Accounts Receivable (also R Co.)		$1,500.00

The treatment would be the same, except for the difference in the details listed in the note register, if the note were made by the R Co. rather than another party, K.

On the R Co.'s books, assuming that the note was received from K on June 25 and was recorded at face amount, the suitable entries on delivery of the note to M Co. are:

Accounts Payable (also M Co.)	$1,500.00	
Notes Receivable (or Notes Receivable Discounted)		$1,200.00
Bank		298.80
Interest Revenue		1.20

(The use of the special account, notes receivable discounted, is explained in the next chapter.)

If the details were the same except that the R Co. gave its own note in settlement the entries on the R Co.'s books would be as follows:

Accounts Payable (also M Co.)	$1,500.00	
Notes Payable		$1,200.00
Bank		298.80
Interest Accrued Payable		1.20

That is, in this event the credit to notes payable appears instead of a credit to notes receivable and the interest element is an accrued liability rather than a revenue. The R Co., in giving its note with interest accrued for six days prior to the due date of the M Co.'s invoice, is in effect charging the creditor with the interest accruing for this period. Hence, the interest charge or cost on this note does not begin to accumulate before July 1.

Partial Payments and Renewals. Partial payments on notes are common, especially in the case of relatively long-term contracts. In

some instances the payments are prearranged and systematic; in others the amounts and times of payment are irregular and at the option of the debtor. On the books of the holder all amounts collected must be credited to the particular notes affected in the notes register and also to the controlling account in the general ledger. Where partial payments are numerous, and especially where a definite program is followed, the use of a special form of note register is helpful.

The apportionment of partial payments between principal and interest is a matter of importance. In the absence of specific provision to the contrary the most satisfactory and equitable rule in general is that which applies the amount of a partial payment, first, to the settlement of any interest which may be accrued to date of such payment, and, second, to the liquidation of principal.

To illustrate the division of partial payments between principal and interest assume that on June 1 a customer of the M Co., who owes $1,000 on account due on that date, gives his note for $1,000 payable in three monthly installments of $250 each, beginning July 1, with the balance payable on October 1 with interest at 6%. Assuming all payments to be made when due the following table shows the monthly accruals of interest, monthly payments, and successive balances, under the method indicated above:

Amount of note, June 1	$1,000.00
Interest to July 1 at 6%	5.00
Principal and interest, July 1	$1,005.00
Payment, July 1	250.00
New balance, July 1	$ 755.00
Interest to August 1 at 6%	3.77
Principal and interest, August 1	$ 758.77
Payment, August 1	250.00
New balance, August 1	$ 508.77
Interest to September 1 at 6%	2.54
Principal and interest, September 1	$ 511.31
Payment, September 1	250.00
New balance, September 1	$ 261.31
Interest to October 1 at 6%	1.31
Amount payable October 1	$ 262.62

In the case of the typical renewal or extension the interest due is collected and the maker replaces the old note with a new note in

which the face amount, interest rate, term, and other details (except dates) are the same as in the old instrument. Under such circumstances no entries in the general ledger are required aside from those needed in recording the interest, although the transaction must be fully reflected in the subsidiary records. In some cases unpaid interest in whole or in part is added to the face of the new note; in other cases the amount of the note may be substantially increased; in still others a partial payment is made on date of maturity and renewal. In all such situations it may be well to make the necessary entries to eliminate the old note and recognize the new.

Dishonored and Doubtful Notes. A note or bill is considered to be legally dishonored when payment is refused or cannot be obtained upon legal presentment for payment at maturity. Formal presentment is not required to hold the party who is primarily liable, but it is usually necessary in order to hold indorser or drawer. A written or oral notice of dishonor must also be sent to drawer or to each indorser who is to be held liable for payment. (There are numerous technical exceptions to this requirement.) The use of a formal notarized communication in this connection is known as "protesting."

Failure of maker or acceptor to make payment at maturity (or within any period of grace which may be allowed) constitutes dishonor but does not demonstrate uncollectibility in the case of paper drawn or indorsed by responsible parties. Even in this situation, however, proper notations should be made in the subsidiary records and it may be desirable to close the amount of dishonored paper, in process of collection from the parties secondarily liable, into a special account. In the case of dishonored notes which are not indorsed or guaranteed (or which have drawers or indorsers of poor standing), and which remain unpaid or unrenewed for any length of time, collection has obviously become very uncertain, and the elimination of all such receivables from the regular accounts is clearly advisable.

To illustrate the latter condition, assume that the M Co. holds the one-year note of the S Co. for $1,000, with interest at 6%, with no indorser, and that the maker fails to pay at maturity. This note is dated January 31, 1949, and on December 31 of the same year interest for eleven months was accrued and credited to revenue. The treatment which involves the use of a special account for the dishonored notes requires the following entries for this case on January 31, 1950 (or shortly thereafter):

Notes and Interest Receivable—Past Due	$1,060	
Notes Receivable		$1,000
Interest Accrued Receivable		55
Interest Charged to Past-Due Notes Receivable		5

By this procedure the special account is charged with the full amount due at maturity (and interest legally accruing subsequent to maturity may later be added). The interest accrued during the last month is credited to a special account rather than to interest revenue, as the supporting receivable is not a good asset, and can be interpreted as a contra to the past-due notes account rather than as an actual earning. The net balance of the special notes account should be covered by an allowance for uncollectibles. If and when considered entirely uncollectible, the amount of the note and accrued interest should of course be written from the active accounts by means of a charge to the allowance for uncollectibles, if such an account has been established, or as a loss. In any event full details should be recorded in the subsidiary records.

An alternative procedure is to charge the dishonored note to the maker's open account (or, where acquired from an indorser who is to be held responsible, to the indorser's account). This is particularly desirable where the note involved is that of a credit customer. If this treatment were applied to the above example the debit would be to the R Co.'s account rather than to the past-due notes account, all other entries remaining the same. Any amount finally collected on a note written off as worthless should be credited to current revenue or to retained earnings, with proper notations in the supporting records.

A note occasionally becomes a bad asset prior to maturity due to the acknowledged insolvency or precarious condition of the party or parties responsible for payment. In this situation it is desirable that the loss be immediately admitted by the proper entries. Again a special suspense account may be charged, however, if there is a prospect that any part of the amount will be finally collected.

Valuation and Audit. As in the case of book accounts, adequate provision should be made periodically for estimated uncollectible notes and bills. Where commercial paper arises primarily through credit sales, and is received in considerable volume, the blanket allowance method of estimating uncollectibles described earlier may be employed. In some cases a single allowance may be established to cover all bad debts, including notes and bills as well as ordinary

accounts. On the other hand, where notes and bills held are relatively few in number, and arise from several sources, the problem of bad debts can best be dealt with in terms of the individual items, without preliminary estimates.

The problem of appraising the individual note or bill is somewhat similar to that of judging the specific book account. Paper past due is always of doubtful validity; notes several times renewed require careful scrutiny; notes representing loans to officers and other employees, especially if of the accommodation type, require special attention; notes acquired in settlement of slow accounts are likely to be somewhat questionable. The fundamental consideration, naturally, is the standing of the payor or of other parties who have assumed responsibility for payment.

As in other connections the routine procedure developed in the handling of commercial paper should include the necessary steps to insure proper internal audit. Frequent reconciliation of the controlling account or accounts with note registers or other forms of supporting records is desirable. Division of work wherever feasible, and provision for adequate checking, should be established features of the procedure. In handling loans and discounts in banks, for example, the records and computations of the cashier furnish in some measure a check on those of the note teller, and vice versa.

In periodic audits by traveling auditors in the organization or by public accountants actual examination of and independent listing of all bills and notes, together with any supporting collateral, is required. In the case of paper out for collection, on deposit elsewhere as collateral, or discounted, actual examination may not be feasible but care must be taken to verify all such items, by direct correspondence with the other parties involved if necessary. Proper classification is an important aspect of the auditor's work. Doubtful and past-due paper should of course be segregated, and attention should be given to the special groupings mentioned above in the discussion of valuation. Adequate checking of interest accruals, discount accumulations, and other computations is a necessary phase of the audit. In some cases special care must be taken to see to it that the instruments themselves have been properly executed, as to amounts, dates, signatures, and other details. In the case of bank examinations particular attention must be given to collateral and to loan approvals, and to the amounts of credit represented by particular names.

Questions

1. Describe the two main classes of commercial paper.
2. Indicate the principal origins and uses of notes. Of bills.
3. Describe the note register and indicate its use.
4. Discuss the classification of notes and bills in the ledger and statements.
5. What are the principal features of bank procedure in handling loans and discounts? What is the "liability ledger"? The "note tickler"?
6. With an illustration show how notes receivable are recorded, assuming that the end of an accounting period falls within the term of the note. Do the same for notes payable.
7. A note is made on July 12 and is due on September 12, the same year. The interest rate is 7%. What is the amount of interest at maturity?
8. With an illustration show that interest may not be apportioned between periods in a strictly equitable manner if the 30-day month and 360-day year are employed in the calculation.
9. Describe the preferred method of applying partial payments to principal and interest, respectively.
10. Discuss the treatment of dishonored notes.
11. What are the principal matters to be investigated in the periodic audit of notes and bills?

XXIV

NOTES AND BILLS DISCOUNTED

Discounting—Significance and Computation. Short-term paper can be readily discounted through banking channels, which gives a relatively high degree of liquidity to this type of receivable. Discounting, however, is not the equivalent of outright sale or liquidation, as the party presenting the paper for discount becomes contingently liable as an indorser or drawer. The typical discounting transaction, accordingly, can be interpreted as a form of borrowing, on the basis of the notes and bills of customers, or, from the standpoint of the bank, as a type of secured loan. In fact the term "discounting" is sometimes applied to loans made on the borrower's own note, especially where the instrument makes no explicit provision for interest.

An important feature of the process of discounting is the special method of calculation commonly used. *To determine the amount of discount on a note or bill the bank applies its regular discount rate to the sum due at maturity, including interest as well as face amount, for the period from date of discounting to date of maturity.* The amount of discount so computed is then deducted from the total amount due at maturity to find the proceeds to be paid or credited to the borrower. To illustrate, assume that on June 1 the M Co. receives a 6%, 60-day note for $1,000, dated June 1, from the R Co., a customer, and that on June 24 the M Co. indorses and discounts this note at its bank at a 6% rate. The amount due at maturity is $1,010 (the face plus interest for sixty days at 6%); the period from date of discounting to due date is one month and six days; the amount of discount is $6.06 (6% of $1,010 for thirty-six days, one tenth of a year); and the net amount available to M Co. is $1,003.94 ($1,010 less $6.06).

The same form of computation is employed in the case of paper

which carries no explicit interest. To illustrate, on May 25 the M Co. received a thirty-day, non-interest-bearing commercial draft for $1,000, and on May 31 discounted this draft at a 6% rate. The amount due at maturity is in this case the face of the draft, $1,000, and the period from discount date to date of maturity, June 24, is twenty-four days. Applying the discount rate, 6%, to the maturity value of $1,000 for a period of twenty-four days (one fifteenth of a year) gives the discount, $4, and deducting this amount from the maturity value yields $996, the amount of the proceeds.

Under the usual arrangement the bank notifies the maker or acceptor when the discounted paper approaches maturity, and makes the collection. In the event that the note is not paid the amount of the maturity value, including interest and any special costs incurred, is charged to the account of the party who presented the paper for discount.

Discounting Interest-Bearing Paper—Illustrative Entries. For a first example assume that on June 1 the M Co. received a 6% note for $1,000 from the R Co., a customer, to be applied on account. The note is dated June 1 and is payable three months from date. On July 1 the note is discounted at the bank at a 6% rate. The proceeds to the M Co. in this case are $1,004.85 (the maturity value, $1,015, less discount thereon for the remainder of the term, $10.15), and the appropriate entries on July 1 on the M Co.'s books, assuming that no accrued interest has been recognized prior to discounting, are:

Cash	$1,004.85	
Notes Receivable Discounted		$1,000.00
Interest Revenue		4.85

A special account, rather than notes receivable, is credited here with the face amount of the note discounted. This practice grows out of the fact, already noted, that discounting represents only a tentative liquidation of the note, and is further discussed a little later.

If the M Co. discounted this note on June 1, immediately upon receipt, the net proceeds would be only $999.78 (the maturity value, $1,015, less discount thereon at 6% for ninety days, $15.22) and the entries on M Co.'s books become:

Cash	$ 999.78	
Discount Cost	.22	
Notes Receivable Discounted		$1,000.00

In this case the problem of interpreting the special charge of 22 cents arises. It is not interest (although often so treated) as interest is a charge for the use of funds in time, and since the M Co. has just received the money there has been as yet no opportunity for interest to accrue. Under one possible interpretation the apparent loss is viewed as a form of sales discount or allowance made to the R Co. when that company's account is credited with $1,000 upon receipt of an item of commercial paper with an actual market value of only $999.78. Under a second interpretation the item is considered to be a special service charge or financial expense associated with the discounting operation. A third and somewhat less reasonable analysis, under which the note is deemed to be worth the full amount of $1,000 upon receipt, and is sacrificed because of an urgent need for funds, leads to the conclusion that the special deduction is an actual loss. In most cases, especially where the amount of shrinkage is relatively small, there may be no serious practical objection to the inclusion of such charges in the regular interest account. Such treatment is not strictly correct, however, and it is important that the accounting employed should not encourage misunderstanding of the nature of the transaction. This point is emphasized further in the discussion of non-interest-bearing paper, later.

A question may now be raised as to the accuracy of the entries displayed for the first situation above. Assume that all conditions are as given except that the M Co.'s year ends on June 30 and that on that date the following interest accrual was recognized:

Interest Accrued Receivable	$5.00	
Interest Revenue		$5.00

Then when the note is discounted on July 1 the following entries are necessary:

Cash	$1,004.85	
Discount Cost.	.15	
Notes Receivable Discounted.		$1,000.00
Interest Accrued Receivable		5.00

This shows that in the first situation a special revenue offset or discount expense of fifteen cents is buried in the net credit to interest revenue of $4.85. It may be argued, of course, that the credit to interest revenue in June is overstated, due to overvaluation of the note upon receipt, and that the ideal initial treatment in any case would

be to credit R Co. for only \$999.78, and handle the note throughout the period prior to discounting on the strict basis of discounted value.

An interesting variation is found where the discount rate as used by the bank is less than the rate carried by the note. Assume, for example, that the M Co. receives a note under the same conditions as described above and that the note is immediately discounted at the bank at a 5% rate. The proceeds in this case are \$1,002.31 (the maturity value of \$1,015.00 less discount thereon for ninety days at 5%, \$12.69), and the required entries on the M Co.'s books are:

Cash	\$1,002.31	
Notes Receivable Discounted		\$1,000.00
Discount Revenue		2.31

The special credit of \$2.31 is evidently not interest earned in the strict sense, but a type of income arising through the tentative transfer of the note on a favorable basis, a gain subject to the special risk of loss and other special charges which may be involved in the handling of notes bearing a relatively high rate of interest. Under another interpretation it may be viewed as an addition to the revenue originally recognized on the sale to the R Co., an addition required because the original entries have not recorded the full amount of revenue to be realized under the peculiar terms and conditions imposed.

Nature and Treatment of Notes Receivable Discounted. The use of the special account, notes receivable discounted, is justified, as previously stated, in view of the fact that the disposition of the paper is not unqualified and final; there is a possibility that the maker will not pay and that the indorser will be obliged to make the amount good to the bank. In the case of an outright sale of the note, or transfer with a qualified indorsement which did not bind the transferor, the credit would be lodged directly in the regular notes receivable account.

The special account, showing the amount of notes discounted and in the hands of the bank, can be interpreted either as a contra to notes receivable or as a liability, representing money borrowed on the security of indorsed paper. On the whole it is more satisfactory to accept the view that notes receivable discounted is merely a section of the main notes account, showing the amount of notes tenta-

tively disposed of. This is especially reasonable where the great majority of notes discounted are regularly collected by the bank, and defaulted notes are a rarity. Under this interpretation a sound presentation in the position statement is as follows:

Notes Receivable	xxx	
Less Notes Discounted	xx	xxx

Or the amount discounted may be shown parenthetically or by means of a footnote. It must not be forgotten that the indorser is indirectly or contingently liable for the full amount of paper discounted, including interest, and that if any maker or acceptor fails to pay the amount in default becomes an effective liability.

As a matter of convenience the amount of the credit to the special account is restricted to the face of the note, although the indorser becomes responsible for the payment of interest as well as principal. If the interest element were included in this credit (or if another special account were credited with the interest due at maturity) it would mean the recognition in whole or in part of interest not yet accrued or represented by any form of value on the indorser's books, and would require the booking of a corresponding contingent receivable, an unusual and generally unnecessary procedure. Nevertheless the credit to interest revenue (or to interest accrued receivable) on the occasion of discounting does not represent, in view of the contingent obligation, full realization; the interest element remains, in some degree, merely interest accrued. A possible compromise procedure in this connection would be to accrue interest fully to date of discounting and then to credit a special account, "interest receivable discounted," with the amount of the interest accrued, on the occasion of discounting. There would be little to be gained, however, by the adoption of this treatment. Where the amount of contingent liability on account of interest due at maturity on discounted notes is large, the statement presentation may well be supplemented with a footnote or comment covering the matter.

If an adequate allowance for uncollectibles is provided the need for the use of a special contra account to acknowledge the contingent liability on notes discounted is not imperative.

When notice is received from the bank that the discounted paper has been collected the transaction is evidently completed, and the tentative account, having served its purpose, should be appropriately charged. To illustrate, assume that the M Co. receives word that the

note of the R Co. for $1,000 which was indorsed and discounted has been collected in full. The entries on the M Co.'s books are:

Notes Receivable Discounted	$1,000	
Notes Receivable		$1,000

Absence of notice of default from the bank, after a reasonable period of "grace," may as a practical matter be viewed as constructive notice of collection.

Where notes which have been discounted are dishonored the bank charges the entire amount to the former holder's account, and on the latter's books it is necessary to debit notes receivable discounted and credit the bank account (assuming that sufficient funds are on deposit), preliminary to the setting up of entries recognizing dishonored notes as indicated in the preceding chapter.

Non-Interest-Bearing Notes and Bills Receivable. Reference has been made to the fact that promissory notes are not always explicitly interest-bearing and that time bills and drafts are often of this character. The important point to be recognized in accounting for such paper on the holder's books—a point usually entirely neglected—is that receivables of this character actually bear interest, notwithstanding the apparent omission of the provision therefor. One might go further and state that interest is always a factor in every commercial contract involving the use of funds or their equivalent over an appreciable period of time, regardless of the nominal terms. Interest in business contracts may be said to be measured by the difference between true initial value or principal and the total amount of cash or equivalent collected or paid; and business men do not willingly furnish funds on a contractual basis unless the total to be returned exceeds the original commitment. In the case of salary and wage contracts and ordinary book accounts it may not be expedient to attempt to recognize the distinction between initial and later values, and to isolate the implicit interest factor. In the case of sound notes and bills, however, the market is highly developed and the methods of valuation and procedure adopted by the banks furnish an adequate guide to other concerns which handle such paper in substantial amounts.

For commercial paper which has a recognized market value it is certainly a questionable practice to present this element in the periodic reports at a figure in excess of such value.

Recording Non-Interest-Bearing Bills Receivable. Assume that the M Co. on June 1 makes a sale to the R Co. of $1,500, invoice amount, and immediately draws on the R Co. in the form of a sixty-day draft for this amount, without interest. Assume, further, that the draft is accepted and returned at once, and is collected in full at maturity. The usual entries for this situation are:

(1)

Bills Receivable	$1,500	
Sales		$1,500
To record sale and receipt of accepted draft		

(2)

Cash	1,500	
Bills Receivable		1,500
To record collection of draft		

(Accounts receivable might first be charged, followed by recognition of bills receivable.)

Under the more accurate alternative treatment, based on approved banking practice and using a discount rate of 6%, the entries are as follows:

(1)

Bills Receivable	$1,500	
Sales Allowances	15	
Sales		$1,500
Bills Receivable—Discount		15

(2)

Cash	1,500	
Bills Receivable—Discount	15	
Bills Receivable		1,500
Interest Revenue		15

The first treatment is subject to rather serious objections. It results in inflation of asset values at the outset and buries a financial earning in the sales account. The second treatment is definitely preferable in that it sets up bills receivable at a conservative discounted value (the difference between face value and the special contra account employed) and it discloses the element of interest earned. Further, the first procedure may result in improper distribution of earnings as between periods. This possibility can be made apparent by assuming that the M Co.'s accounting period ends June 30. With this condition the entries under the first method would be unchanged and all of the revenue involved would be absorbed in

the month of June. Under the second procedure, however, the discount or interest factor would be accrued on June 30 by means of the following entries:

Bills Receivable—Discount	$7.50	
Interest Revenue		$7.50

And at the end of July, when the draft is collected, the balance of the discount would be closed to the interest revenue account. The result from an income standpoint, evidently, is the proper division of the item of interest between the two accounting periods involved. (This assumes that compounding is not required in apportionment of short-term interest accruals.)

It should be observed that in accruing interest or discount in the example the charge is to the offsetting discount account. The necessity for this form of adjustment grows out of the acceptance of the practice of recording such paper at face value, which is also maturity value. Since the main note or bill account has already been charged with the amount due at maturity, the debit covering the element of implicit interest must not be duplicated elsewhere. Instead the contra account is appropriately reduced, thus validating a portion of the interest represented in the face amount of the instrument. If bills receivable were charged at the outset with the net value of $1,485 interest accrued would be charged directly to receivables. It may be added that the use of a single account showing net value throughout would be an entirely acceptable procedure.

Where discounted values are used on the vendor's books and the paper is discounted at the bank there is no special adjustment required and no temptation to make improper charges to interest. Suppose, for example, that in the above case the M Co., after recording the receipt of the draft as shown under the second method, immediately discounted the paper at the bank at a 6% rate. The entries on the occasion of discounting would be:

Cash	$1,485	
Bills Receivable—Discount	15	
Bills Receivable Discounted		$1,500

These entries are entirely consistent with the initial entries and conform precisely to the conditions. If the draft were discounted July 1, and assuming that the discount was accrued on June 30 as indicated above, the entries would become:

Cash	$1,492.50	
Bills Receivable—Discount	7.50	
Bills Receivable Discounted		$1,500.00

The use of the title "bills receivable" rather than notes receivable in the above illustrative entries is not essential. Drafts as well as notes may be included in a single general-ledger account and all details of both types of paper may be listed in one subsidiary ledger or register.

Discounting–General Entries on Bank's Books. In the preceding chapter there was some discussion of typical procedure in the handling of loans and discounts by banks. At this point it may be helpful to emphasize the ledger entries made by the bank in discounting, in accruing discount, and in making collections of discounted paper.

Assume that on July 1 the Commerce Bank discounts for the M Co. the draft accepted by the R Co., with conditions as described in the immediately preceding section, the rate of discount being 6%. The entries on the bank's general books on the occasion of discounting would be substantially as follows:

Loans and Discounts.	$1,500.00	
Deposits (and M Co.'s account)		$1,492.50
Unearned Discounts		7.50

The item of unearned discounts should be interpreted as a contra to loans and discounts, the difference representing the net amount of the asset. Entries would of course also be required in the liability ledger and other supplementary records.

To illustrate the accruing of discount assume that on July 15 the bank is preparing statements of condition and earnings and that as a part of the necessary adjusting entries the earned discount on the above draft is accrued, as follows:

Unearned Discounts	$3.75	
Interest and Discount Earned		$3.75

When the draft is collected, assuming no other entries affecting the situation are recorded meanwhile, the proper entries are:

Cash	$1,500.00	
Unearned Discounts	3.75	
Loans and Discounts		$1,500.00
Interest and Discount Earned		3.75

Large banking institutions, it may be noted, often accrue interest and discount earned daily.

An interesting feature of the entries employed by the bank in recording discounted paper is the charging of loans and discounts with the full amount due at maturity. This is done in the case of paper carrying explicit interest as well as in the handling of so-called non-interest-bearing bills and notes. For example, in discounting a 6%, sixty-day note for $1,000 at a 6% rate the initial entries on the bank's books would be:

Loans and Discounts	$1,010.00	
Deposits (and borrower's—or indorser's—account)		$999.90
Unearned Discounts		10.10

Under this procedure the entire accrual of interest is accomplished by charging the contra account, unearned discounts, and the element of interest accrued receivable is accumulated, without separate classification, in loans and discounts. This practice is not objectionable, assuming that the supporting details are properly maintained.

It is bad practice in bank accounting to treat discount as revenue when calculated, in the period in which the loan is made. The bank has surely not earned the amount of the discount at the outset. Upon the occasion of making the loan the bank receives no interest, and interest can be said to accrue only as the interval between the date of discounting and the date of maturity elapses. The correct analysis is especially important in view of the seasonal fluctuations in the amount of paper discounted coupled with the fact that most banks prepare reports of financial condition several times a year. Under these circumstances it should be obvious that the course of earnings will not be correctly charted from period to period unless discounts are accounted for on an accrual basis.

In bank statements the balance of unearned discounts is included among the "liabilities." It would be much better practice if this balance were regularly treated as an offset to the gross book value of loans and discounts.

Non-Interest-Bearing Bills Payable. The proper treatment on the payor's books of notes and bills which are nominally non-interest-bearing follows the lines discussed above from the standpoint of the holder of such paper. To illustrate, assume that on June 15 the M Co., which owes the S Co. $1,500 on account, accepts a thirty-day

draft for this amount payable to the S Co., without explicit interest. On date of acceptance and return of draft the following entries—using a 6% rate—are appropriate on the M Co.'s books:

Accounts Payable (also S Co.)	$1,500.00	
Bills Payable—Discount	7.50	
Bills Payable		$1,500.00
Purchase Allowances		7.50

When the draft is paid, assuming no intervening closing date, the proper entries are:

Bills Payable	$1,500.00	
Interest Charges	7.50	
Bank		$1,500.00
Bills Payable—Discount		7.50

If June 30 were the end of an accounting period on the M Co.'s books it would be necessary to accrue discount on that date, as follows:

Interest Charges	$3.75	
Bills Payable—Discount		$3.75

The entries on the date of payment would then be modified to meet this condition.

The usual treatment of this situation in business practice, by which non-interest-bearing time drafts are recorded at face value throughout, without the use of an offsetting discount account, is definitely objectionable in that it fails to distinguish between purchase discounts and allowances and financial charges on account of implicit interest. See the discussion of this question in terms of non-interest-bearing notes and bills receivable, above.

Discounting Notes Payable. Bank loans are commonly made on the basis of interest-bearing notes, but consideration of an illustration of the use of a non-interest-bearing note will be helpful in bringing out the essential nature and proper treatment of liabilities of this type. The R Co. on May 31 offers for discount its own note for $1,000 for six months, without explicit interest, and the note is accepted by a financial institution at a 6% rate. The proceeds in this case would be $970 (the maturity value, $1,000, less discount thereon for six months at 6%, $30), and the entries on the R Co.'s books on the occasion of discounting are:

Cash	$970	
Notes Payable—Discount	30	
Notes Payable		$1,000

The discount account should be interpreted as an offset to a liability stated in terms of maturity value rather than present value. The R Co., in effect, has borrowed only $970, not $1,000, and has implicitly agreed to pay $30 for the use of the funds obtained. To treat the effective liability at this point as the full $1,000 would be equivalent to charging for the use of the money before the passing of time justified the recognition of interest. This view of the case is especially important where two or more distinct accounting periods are involved during the life of a particular contract. If the accounting period of the R Co. ends on June 30, for example, the entries accruing interest on that date would be as follows:

Interest Charges	$5	
Notes Payable—Discount		$5

Then when the note is paid on November 30 the following entries would be in order:

Interest Charges	$ 25	
Notes Payable	1,000	
Notes Payable—Discount		$ 25
Bank		1,000

The effect of this procedure is to allocate the interest charge appropriately to the two periods, as the liability accrues from a net amount of $970 to the maturity value of $1,000. It should be noted that the offsetting discount account, rather than interest accrued payable, is credited each period with the accruing interest or discount. This is necessary in view of the fact that the complete maturity value, including implicit interest, is credited to a gross liability account at the outset, and the periodic credit to the offsetting account has the effect of validating a portion of this maturity value. If the tradition that the face value of the liability must appear in the accounts were ignored and the liability account were credited with the true original principal, the accrual of interest might be credited to interest payable in the regular way, and the essential nature of the situation more clearly displayed. In the case given, for example, the original entries under this treatment on the R Co.'s books become:

Cash	$970	
Notes Payable (amount borrowed)		$970

The accrual on June 30 could then be recorded:

Interest Charges	$ 5	
Interest Accrued Payable		$ 5

And the entries at date of payment would be:

Interest Charges	$ 25	
Interest Accrued Payable	5	
Notes Payable (amount borrowed)	970	
Bank		$1,000

(It would of course be possible to pass the additional accrual of $25 through the interest payable account.) There is, however, no serious objection to a method of accounting by which maturity amounts are at all times displayed in the accounts, provided the proper contra account is set up and handled in a satisfactory manner.

Attention should again be called to the fact that a note may be issued at a discount, even if an interest-bearing obligation, if the market rate of interest or discount exceeds the stated rate, or if the stated rate is applied to the maturity value in determining the proceeds, thus increasing the true rate of interest employed. Where this is the case it is important to recognize that the difference between the face amount and the proceeds or true initial principal is a discount which represents an adjustment of the interest rate and which should accordingly be systematically accrued and charged to interest in precisely the same manner as the discount on non-interest-bearing paper.

"Prepaid Interest." It has been pointed out that the usual treatment accorded to short-term non-interest-bearing paper completely ignores the element of interest implicitly involved, with consequent improper valuation of assets and liabilities, and unsound classification and periodic distribution of income charges and credits, especially objectionable where the accounting period in effect is relatively short. Another unacceptable tradition of accounting practice, found especially in connection with long-term obligations which, although bearing interest, are issued at less than face or par value, is the labeling of the difference between actual proceeds and maturity value "prepaid interest." This usage is decidedly unfortunate.

Interest is a charge for the use of funds as time elapses and in the strict sense there can be no such thing as "prepaid" interest, as any advance by the borrower would merely serve to reduce the amount of the loan. Further, in the case of a loan effected at a discount the borrower actually makes no advance or prepayment whatsoever. Far from being "prepaid" interest the discount represents *unpaid* or future interest, interest which will not be paid until the date of maturity. It is *calculated* in advance, but is certainly not prepaid. At the outset the discount measures the difference between the actual initial principal and a stated sum due at a future date. As time passes this difference accrues as all or as a part of the interest on the contract and requires periodic recognition. No charge to discount would be required when the loan is made were it not for the practice of booking face or maturity value. The true liability at the beginning of the contract is not the maturity value but the amount actually received, in cash or equivalent, by the borrower. To hold that maturity value, an amount in excess of the funds received by the borrower and furnished by the lender, is the effective original liability for accounting purposes is absurd, as this would mean that in a purely voluntary commercial transaction the borrower was willing to incur an immediate obligation in excess of values obtained, thus suffering an outright loss. It is quite clear, therefore, that the discount account must be interpreted as a contra or offset to a liability account which has been credited with an amount due in the future, and which is accordingly subject to adjustment in the presentation of the immediate, effective obligation.

Relation of Discount and Interest. The difference between discount and interest lies essentially in the difference between two methods of borrowing, between two methods of calculating and paying interest. Where the rate of interest and other terms are fully satisfactory to the party furnishing the funds the amount loaned—the true principal—equals the face of the note, and interest accrues on this amount as the period covered by the contract expires. In the case of non-interest-bearing paper, so-called, the borrower is obliged to accept a sum which is less than the face of the note or bill by the full amount which the party furnishing the funds requires by way of interest, and this difference—the discount from face—accrues or accumulates through the term of the instrument. Where the contract carries a rate of

interest less than the rate required by the bank or other party making the loan the discount consists of the difference between the interest required by the lender throughout the life of the contract and the amount of interest expressly provided for therein.

In the process of discounting the interest is calculated by applying a specified rate to the amount or amounts due at one or more maturity dates in the determination of net present value. In the ordinary interest calculation, on the other hand, a specified rate is applied to a stated initial principal to ascertain the amount of interest. A stated rate of discount therefore produces a larger amount of interest than the same rate of interest; in other words, the effective rate of interest in a given transaction involving discounting is higher than the stated rate of discount. To illustrate, the R Co. borrows $940, giving its note for $1,000 for one year without interest. The rate of discount in this case is evidently 6%. The rate of interest, however, is higher. The amount furnished by the lender is only $940; the interest charged for the loan for one year is $60; the annual rate is therefore 60/940 or 6.383%.

Long-Term Non-Interest-Bearing Obligations. Long-term obligations with no provision for regular "interest" payments are rare. Nevertheless consideration of an example of this type of contract may be helpful in emphasizing the true nature and proper treatment of discount on short-term paper having no explicit interest provision, and the folly of the "prepaid interest" interpretation.

The United States has issued one series of bonds of the non-interest-bearing type, and these "E" bonds may be used for illustration. Assume that on July 1 M loans $750 to the United States and receives a ten-year bond with a maturity value of $1,000, and no interest coupons or provision for interim interest payments. That is, the total interest to be earned is represented by the excess of maturity amount over original investment, and is collectible in full at maturity in the form of a portion of the face or maturity amount. (Actually the schedule of redemption values does provide the possibility of repayment of investment and some interest at various dates, although the rates implicit in this schedule do not match the rate earned if the security is held to maturity.) The implicit interest rate earned, if the bond is held to the due date, is 2.9% per annum, compounded semiannually, or, more precisely, 1.45% per half-year

throughout the life of the contract. Assume, further, that M's accounting period is six months, ending June 30 and December 31. The entries at date of purchase are:

U. S. Bonds	$750	
Bank		$750

At the end of the first period following acquisition of the bond, and accepting the view that the bond will be held to maturity, interest has accrued at 1.45% on the initial investment of $750 and the appropriate entries are:

U. S. Bonds	$10.88	
Interest Revenue		$10.88

The accrued investment is now $760.88 and interest thereon at 1.45% amounts to $11.03. The entries at the end of the second period would therefore be as follows:

U. S. Bonds	$11.03	
Interest Revenue		$11.03

Continuing this procedure throughout the life of the bonds would accumulate the investment account to maturity value and spread the total income of $250 appropriately in view of the terms of the contract.

In these entries a single account is used to show the accrued value of the bonds. It would of course be possible to set up maturity amount in one account with a contra account showing the discount. Accruing interest revenue would then be charged to the contra account.

On the borrower's books a corresponding treatment is necessary if the implicit interest charge is to be spread over the life of the contract and the correct accrued liability reported periodically.

Summary Illustration. To emphasize the calculations and entries arising in connection with notes and bills, particularly in discounting operations, another example will be considered at this point, with attention being given to the accounts of all parties involved.

The M Co. on December 1, 1949, makes a sale to the R Co. of $5,000, gross, the invoice being subject to a discount of 2% if paid in ten days. On December 10 the R Co. delivers to the M Co. a 6%, indorsed note for $2,000, dated November 10, and due February 10, of which the payor is the K Co. and the payee the R Co., an accepted draft without interest, dated December 10 and due February 10, of

which the drawer is the R Co., the drawee and acceptor the K Co., and the payee the M Co., and a check for $910 to balance the account. On January 10, 1950, the M Co. discounts both note and draft at the S Bank at a 6% rate, and the bank reports collection in full on the due date. In all cases December 31 is the only closing date of an accounting period involved.

On the books of the M Co. the proper entries are as follows:

December 1, 1949		
Accounts Receivable (also R Co.)	$4,900.00	
Sales		$4,900.00
December 10		
Cash	910.00	
Bills Receivable	2,000.00	
Notes Receivable	2,000.00	
Interest Accrued Receivable	10.00	
Accounts Receivable (also R Co.)		4,900.00
Bills Receivable—Discount		20.00
December 31		
Interest Accrued Receivable	6.67	
Bills Receivable—Discount	6.67	
Interest Revenue		13.34
January 10, 1950		
Cash	4,009.85	
Bills Receivable—Discount	13.33	
Notes Receivable Discounted		2,000.00
Bills Receivable Discounted		2,000.00
Interest Accrued Receivable		16.67
Interest Revenue		6.51
February 10		
Notes Receivable Discounted	2,000.00	
Bills Receivable Discounted	2,000.00	
Notes Receivable		2,000.00
Bills Receivable		2,000.00

Sales and receivables are recorded on a net price basis on December 1, but bills receivable are shown at maturity value on December 10, and the discount is credited to a contra account. The calculations required on December 10 should be obvious. On December 31 interest and discount are accrued for two-thirds of a month (using the illustrative procedure which assumes all months are of equal length). On January 10 the proceeds of the note, which now has but one month to run, are readily found by subtracting from the sum due at maturity, $2,030, the discount thereon for one month at 6%, $10.15. The proceeds of the draft are found, similarly, by subtracting from the amount due at maturity, $2,000, the discount for the one month from date of discounting to maturity at 6%, $10. It is assumed that the proceeds are charged first to cash in the process of recording deposits. The credit to interest revenue on January 10, which is the excess of the proceeds over the book value of the receivables, is 16 cents less than the amount which would be accrued on that date to cover interest for ten days on the note and discount for the same period on the draft. That is due to the fact that although the draft has been handled on the books on the basis of discounted value, the note has been dealt with in terms of face value and accrued interest. The amount of such a difference, as was noted earlier,

might be charged to a special discount cost account, interest revenue then being credited with the full amount as regularly accrued. Had the M Co. discounted the note when received and applied the discounting computation to the accrual of interest on December 31, there would have been no discount cost when the paper was discounted at the bank.

The entries on the books of the R Co. are:

December 1, 1949

(assuming the goods were received immediately)

Merchandise	$4,900.00	
Accounts Payable (also M Co.)		$4,900.00

December 10

Accounts Payable (also M Co.)	4,900.00	
Bills Receivable—Discount	20.00	
Bills Receivable Discounted		2,000.00
Notes Receivable Discounted		2,000.00
Bank		910.00
Interest Revenue		10.00

February 10, 1950

Bills Receivable Discounted	2,000.00	
Notes Receivable Discounted	2,000.00	
Bills Receivable		2,000.00
Notes Receivable		2,000.00

In this treatment the special contra accounts are used to show the delivery of the note and draft to the M Co. The use of these accounts is desirable here, as in the case of discounting at a bank, since the R Co. has indorsed the note and is contingently liable as drawer in the case of the draft. On the other hand, the application of the term "discounted" to the note is subject to the minor objection that the note was accepted by the M Co. on the basis of face and accrued interest and hence was not discounted in the strict technical sense.

On the K Co.'s books the appropriate entries are:

November 10, 1949

Accounts Payable (also R Co.)	$2,000.00	
Notes Payable		$2,000.00

December 10

Accounts Payable (also R Co.)	2,000.00	
Bills Payable—Discount	20.00	
Bills Payable		2,000.00
Purchase Allowances		20.00

December 31

Interest Charges	23.34	
Interest Accrued Payable		16.67
Bills Payable—Discount		6.67

February 10, 1950

Bills Payable	2,000.00	
Notes Payable	2,000.00	
Interest Accrued Payable	16.67	
Interest Charges	26.66	
Bank		4,030.00
Bills Payable—Discount		13.33

These entries involve the additional minor assumptions that the K Co. was indebted to the R Co. on account and applied the note given and bill accepted on this indebtedness, that the note is actually delivered on November 10, and that the gross amount allowed on account is $4,000, with a special allowance involved of $20. The accrued interest charge on December 31 is the sum of interest for one and two-thirds months on the note and accrued discount for two-thirds of a month on the draft. On February 10 the additional charge to interest represents an accrual of interest on the note and discount on the draft for the balance of the term, the amount being $13.33 in each case.

The entries on the S Bank's books are as follows:

January 10, 1950		
Loans and Discounts	$4,030.00	
Deposits (also M Co.'s account)		$4,009.85
Unearned Discounts		20.15
February 10		
Cash	4,030.00	
Unearned Discounts	20.15	
Loans and Discounts		4,030.00
Interest and Discount Earned		20.15

The computations were sufficiently explained above. The interest and discount might be accrued by the bank in a series of entries.

Questions

1. With an illustration precisely describe the discounting process: (a) for an interest-bearing note; (b) for a non-interest-bearing time draft. Give illustrative entries, assuming the end of an accounting period falls within the term of the instrument.

2. Explain the character of the account "notes receivable discounted" and discuss its presentation in the position statement. Should the contingent liability for interest be recognized on the indorser's books?

3. With illustrations show that the conventional treatment of notes and bills may result in burying items of sales and cost adjustments in the interest revenue or interest charges account.

4. Where a bill with a face value of $1,000 has a recognized cash value, through regular banking channels, of $995, at what figure should it be presented in the holder's financial statement?

5. Outline the general entries covering discounted paper on the bank's books and statements. Why is it especially important that a bank distinguish carefully between earned and unearned discount?

6. Give illustrative entries covering the issue of non-interest-bearing notes payable, the accrual of discount, and the payment of face amount at maturity.

7. Why is the term "prepaid interest" as applied to discount a misnomer? Can you give an example of a transaction in which interest is truly prepaid?

8. Why is a 6% rate of discount, for example, equivalent to a rate of "interest" of more than 6%?

9. Assuming that you buy a U.S. bond, series "E" with a maturity value of $1,000 ten years from date of acquisition, what is the accrued value of the bond after you have held it two years?

XXV

MERCHANDISING ACCOUNTS

Use of Purchases and Inventory Accounts. In merchandising or trading concerns the use of a separate account for merchandise costs incurred during the period, with an accompanying merchandise inventory account to represent the balance on hand at the end of each period, is common practice. Where this condition is found the entries recognizing the new inventory and the merchandise cost of sales may take either of two main forms: (1) the inventory account may be increased or decreased to the amount of the concluding inventory, with a concurrent credit closing the purchases account and a charge to merchandise cost of sales for the amount applicable to the sales of the period; (2) the inventory account may be credited with the amount of the beginning inventory (or an amount equal to merchandise cost of sales if the inventory exceeds this figure), the new inventory balance being set up out of the purchases account (the excess of purchases over the new inventory, if any, being included in cost of sales). The results are of course the same under either form.

Assume, for example, that the trial balance of the M Co. on March 31, at the end of a period of three months, shows a merchandise inventory as of January 1 of $20,000 and purchases of $30,000, and that the new inventory on March 31 is found to be $25,000. The entries on March 31, under the first arrangement indicated, are as follows:

Merchandise Inventory	$ 5,000	
Merchandise Cost of Sales	25,000	
Purchases		$30,000
To close temporary purchases account and recognize new inventory and cost of sales		

Under the second form referred to the necessary entries are:

(1)

Merchandise Cost of Sales	$20,000	
Merchandise Inventory		$20,000
To transfer opening inventory to cost of sales		

(2)

Merchandise Inventory.	25,000	
Merchandise Cost of Sales	5,000	
Purchases		30,000
To set up new inventory and close balance of purchases to cost of sales		

Assuming conditions as above except that the inventory on March 31 is only $15,000, the entries under the first procedure are as follows:

Merchandise Cost of Sales	$35,000	
Merchandise Inventory		$ 5,000
Purchases		30,000

Under the second arrangement the entries are:

(1)

Merchandise Cost of Sales	$20,000	
Merchandise Inventory		$20,000

(2)

Merchandise Inventory.	15,000	
Merchandise Cost of Sales	15,000	
Purchases		30,000

The first form of entries, in which there is a net adjustment of the inventory account, is somewhat the simpler. The second procedure has the minor advantages of conforming to the theory that goods are (or should be) disposed of in the order of their acquisition—that merchandise cost of sales is made up of, first, the beginning inventory and, second, current purchases.

Ignoring the possibility of merchandise shortage and other discrepancies, and assuming that both beginning and ending inventory figures are on a cost basis, merchandise cost of sales is computed by adding the beginning inventory and current purchases and deducting from the resulting sum the concluding inventory. And any scheme of entries is acceptable which reflects the inventory figures and the cost of sales clearly in the ledger records.

The division of merchandise cost incurred into inventory account and purchases is not objectionable but at the same time is a pro-

cedure which has no considerable merit. The use of the purchases account serves to emphasize the current inflow of merchandise, but without this account the amount of purchases can be readily ascertained from the proper columns of the voucher register or other journal medium used or from any compilation of purchase invoices.

Application of Transportation Charges. Where in-freight and other transportation charges on merchandise purchases are set up in separate accounts instead of being included directly in merchandise cost the amount of such charges represented in the inventory at the close of the period should be transferred to merchandise inventory account and the balance should be charged to merchandise cost of sales. This may be accomplished either by a net adjustment in terms of inventory and cost of sales or by passing the total of the transportation cost through the main merchandise or purchases account.

Assume, for example, that on January 1 the inventory of the R Co.—including applicable transportation costs of $1,000—is $11,000, that the net invoice cost of purchases during the following quarter —charged to a separate purchases account—amounts to $20,000, that transportation costs on merchandise received—also charged to a distinct account—total $2,000, that the amount of the inventory on March 31, at net invoice cost, exclusive of all carriage costs, is $12,000, and that the transportation charges applicable to the concluding inventory amount to $1,200. The adjusting and closing entries with respect to these accounts, using the method of net adjustment, are:

(1)

Merchandise Cost of Sales	$18,000	
Merchandise Inventory.	2,000	
Purchases		$20,000
To apportion purchases between inventory and cost of sales		

(2)

Merchandise Cost of Sales	1,800	
Merchandise Inventory.	200	
Transportation Costs.		2,000
To apportion transportation costs between inventory and cost of sales		

As emphasized in earlier discussions, transportation charges are clearly a part of the cost of goods. This fact cannot be blinked when the charges are paid by the vendor, and are covered by the invoice price; the essential relationship remains the same when the charges are separately incurred and actual payment is made by the vendee.

Where merchandise cost is divided between two or more departmental accounts the costs of transportation should be similarly apportioned. This may involve the use of estimates, particularly where specific shipments and hence specific freight invoices are assignable to several departments, but for most situations a reasonable allocation can be made without great difficulty. The general entries for each department will follow the scheme outlined above.

Application of Other Costs to Merchandise. Ideally the costs of receiving, handling, and storing merchandise should be segregated and treated in substantially the same manner as transportation charges, and in some situations such treatment is not impracticable. For example, the labor and other direct costs of the receiving and storing activities of the R Co. are regularly charged to a separate account and the amount of such costs incurred for the three months January-March is $1,500. The indirect costs applicable to these activities for this period are estimated as follows: insurance, $100; depreciation, $100; heat, power, and light, $50; property and other taxes, $50. Other conditions are as in the example in the preceding section except that the opening inventory is $11,500, of which the amount of $500 is estimated handling and storing cost, and the concluding inventory is $13,800, which includes $600 of such costs. Appropriate adjusting and closing entries covering handling and storing costs in this case (using the net adjustment method) are:

(1)

Handling and Storing Costs	$ 300	
Insurance		$ 100
Depreciation Cost		100
Heat, Power, and Light		50
Taxes		50
To transfer assignable overhead costs to cost of handling and storing merchandise		

(2)

Merchandise Inventory	100	
Merchandise Cost of Sales	1,700	
Handling and Storing Costs		1,800
To apportion handling and storing costs incurred between increase in inventory and cost of sales		

If a single merchandise account were employed in lieu of the separate inventory and purchases accounts the entire amount of such costs incurred might be charged to merchandise, the appropriate amount then finding its way to cost of sales along with invoice cost and transportation charges; but the term "purchases" is hardly a

suitable label to cover the costs of handling and storing, even temporarily. It should be noticed that the entries by which insurance, depreciation, etc. are transferred to handling and storing costs assume the use of a classification of operating accounts by kinds of charges, rather than by departments or functions, in which the more general or indirect costs are originally entered.

Where two or more merchandise departments are recognized in the accounts the assignment of the costs of handling and storing would presumably require the use of estimates at various points. This would be particularly true of the indirect charges—insurance, depreciation, etc.

Broadly viewed all costs of operating a trading concern finally constitute costs of delivered merchandise, the product of the business, and it can be argued, accordingly, that all costs which have a bearing on future sales should be treated as an element in merchandise inventory. It does not follow that for the typical concern, however, or even the large departmentalized organization, it is feasible to force the mass of operating charges through the merchandise funnel, registering a precise division for each element of cost incurred between periodic inventory balances and merchandise cost of sales. Many of the so-called overhead costs have no definite, ascertainable relation to the flow of merchandise through the enterprise, and any attempt to attach such costs periodically to merchandise accounts would encounter serious difficulties and could not be expected to result in any great improvement in the quality of the operating reports. This is particularly true of general administrative charges. Moreover, those costs which occur at or after the point of sale clearly have no place, at any stage, in the merchandise accounts. At the same time it must be urged that to define the cost of merchandise on hand strictly in terms of invoice cost, with no recognition of the effect of the other charges necessary to place the goods in a position ready for sale, leads to understatement of the actual cost of goods on hand and to distortion of operating results, particularly in connection with monthly and other short-term reckonings. Accountants should continue to explore the possibilities of improving the distribution between periods of the costs of handling and storing merchandise. It may not be expedient to attempt to assign such costs to particular items or batches of merchandise, but the making of reasonable statistical estimates of their relation to merchandise flow, by important departments and divisions, is not out of the question.

Adjustments of Purchases. The treatment of purchase discounts, allowances, and returns was discussed earlier, but at this point the subject may be briefly reviewed, with particular reference to the use of a purchases account and the related periodic adjustments.

For example, assume that the trial balance of the M Co. on December 31 shows the following accounts relating to purchases of merchandise: purchases (at gross prices), \$100,000; purchases–discounts, \$2,500; purchases–allowances, \$500; purchases–returns, \$800. Assume, further, that discounts on unpaid invoices, all of which will presumably be accepted, amount to \$500, and that it is decided to claim a special allowance of \$100 on a shipment recently received from the S Co. Under these conditions the following entries are needed to adjust purchases and close the supplementary accounts:

(1)		
Accounts Payable—Allowance for Outstanding Discounts .	\$ 500	
Purchases—Discounts		\$ 500
To accrue effect of outstanding discounts to be taken		
(2)		
Accounts Payable (and S Co.).	100	
Purchases—Allowances		100
To record claim on S Co.		
(3)		
Purchases—Discounts	3,000	
Purchases		3,000
To transfer discounts taken and to be taken to main purchases account		
(4)		
Purchases—Allowances.	600	
Purchases		600
To transfer allowances to purchases account		
(5)		
Purchases—Returns	800	
Purchases		800
To close returns to purchases account		

After the supplementary items have been transferred to purchases the main account is closed, in turn, on the basis of inventory data, as indicated previously. The allowance for outstanding discounts, it should be remembered, is a contra to accounts payable.

This method of disposing of discounts and related items results in a showing of the net cost of purchases and preserves the integrity of merchandise cost of sales, a matter of importance in departmental accounting. The practice of treating discounts as an item of income

rather than as an adjustment of cost, still followed by many concerns, is definitely objectionable.

Where a single main merchandise account is used, in lieu of inventory and purchases accounts, discounts and other adjustments may still be recorded in distinct accounts, if desired.

If merchandise costs are recorded in terms of net rather than gross prices, as pointed out in a previous chapter, there is no occasion for recognizing discounts taken, or of accruing discounts to be taken.

Sales Adjustments. Sales adjustments for discounts, allowances, returns, bad debts, etc. have been discussed in some detail in earlier chapters. At this point it will be sufficient to illustrate the entries required at the close of the period, including the disposition of the supplementary accounts used.

In the trial balance of the M Co. on December 31 the following accounts relating to sales appear: sales (at gross prices), \$50,000; sales—discounts, \$1,200; sales—allowances, \$300; sales—returns, \$500. At this time the amount of discounts outstanding—of which it is expected that customers will accept 90%—is \$300, there are no allowances to be accrued, estimated returns on deliveries made amount to \$100, and a proper provision for uncollectibles originating during the period is \$1,000. The necessary adjusting entries are:

(1)

Sales—Discounts	\$ 270	
Accounts Receivable—Allowance for Outstanding Discounts		\$ 270
To accrue effect on current business of discounts expected to be taken		

(2)

Sales—Returns	100	
Accounts Receivable—Allowance for Returns		100
To accrue expected returns on current business		

(3)

Sales—Adjustment for Bad Debts	1,000	
Accounts Receivable—Allowance for Bad Debts		1,000
To set up provision for estimated bad debts		

After these entries are posted the supplementary sales accounts are closed, as follows:

(1)

Sales	\$1,470	
Sales—Discounts		\$1,470

(2)

Sales	300	
Sales—Allowances		300

(3)

Sales	600	
Sales—Returns		600

(4)

Sales	1,000	
Sales—Adjustment for Bad Debts		1,000

The sales account, after posting these entries, shows the amount of adjusted revenue for the period, and is closed, in turn, either directly to expense and revenue or, first, to an intermediate summary account.

Closing the accounts with sales adjustments directly into the main sales account does not preclude the reporting of such adjustments in the income statement. With respect to ordinary discounts, allowances, and returns the need for disclosure in the statement is slight, but it is good practice to report the amount of the adjustment for estimated bad debts.

As explained in a preceding chapter the recognition on the books of estimated returns outstanding necessitates setting up the estimated net value of goods to be returned with a corresponding correction of merchandise cost of sales.

Mention should be made again of the need for periodic study of the cost of returns. Where such studies are made and it is desired to reflect the results in the ledger accounts, entries are required to transfer the estimated cost or loss from the operating accounts in which the transportation and other costs involved are recorded to a special account.

Merchandise Summary—"Gross Profit." A traditional feature of merchandise accounting, still employed in some enterprises, is the use of a "trading" account or other form of intermediate summary in which sales and merchandise costs, including all special modifying factors, are collected for the purpose of disclosing and emphasizing the so-called "gross profit" or margin figure. For the enterprise as a whole this practice has no considerable merit, in part because the intermediate revenue balance disclosed—total revenue less merchandise cost thereof—has much less significance than is commonly attributed to this element, and as usually labeled is likely to be downright misleading, and in part because the amount of "gross profit"

can be readily compiled and reported without the use of the trading summary. Where sales and merchandise costs are definitely departmentalized, on the other hand, the use of an account showing sales and merchandise cost of sales for each department may be helpful in emphasizing figures significant for internal comparative purposes.

In any event care must be taken in interpreting balances determined before deduction of the various operating costs, in addition to the cost of merchandise, which must be considered before true earning power is disclosed. Merchandise cost of sales is an important element in the total charges to revenue in the trading field, but it is not the whole story, and from the standpoint of economic analysis and sound business management this cost occupies no peculiar or preferential position. The merchant buys merchandise—his raw material, performs various services in connection therewith, and has for sale a finished product which he hopes to market at a price above the grand total of costs, including merchandise, which has been incurred. If the total of costs exceeds the revenue total this means that only a portion of each and all costs has been recouped. Except for the violation of a traditional mode of thought, therefore, it would be quite as proper to determine an intermediate operating balance by first deducting all labor costs from sales, or by deducting all costs other than merchandise, as it is to treat merchandise cost as a primary charge.

Departmental Trading Accounts Illustrated. To illustrate the use of departmental trading summaries assume that the T Co. sells two main classes of merchandise, A and B, and that the merchandise costs, including transportation, are separately accounted for although other operating costs are not departmentalized. Assume, further, that on January 1 the inventories amount to $10,000 and $15,000, respectively, that purchases for the quarter ending March 31 are $20,000 and $30,000, respectively, that sales for the quarter are $35,000 and $50,000, and that the inventories on March 31 are $12,000 and $16,000. The merchandise cost of sales for department A is then $18,000 ($10,000 plus $20,000 less $12,000), and for department B, $29,000 ($15,000 plus $30,000 less $16,000). The adjusting entries (employing a purchases account) are as follows:

(1)

Merchandise Inventory—A	$ 2,000	
Merchandise Cost of Sales—A	18,000	
Purchases—A		$20,000

(2)

Merchandise Inventory—B.	1,000	
Merchandise Cost of Sales—B.	29,000	
Purchases—B		30,000

The closing entries for department A accounts are as follows:

(1)

Sales—A.	$35,000	
Trading Summary—A		$35,000

(2)

Trading Summary—A	18,000	
Merchandise Cost of Sales—A		18,000

(3)

Trading Summary—A	17,000	
Expense and Revenue		17,000

The corresponding closing entries for department B are:

(1)

Sales—B	$50,000	
Trading Summary—B		$50,000

(2)

Trading Summary—B	29,000	
Merchandise Cost of Sales—B		29,000

(3)

Trading Summary—B	21,000	
Expense and Revenue		21,000

The final closing entries for each department consist of the transfer of the departmental margin of revenue over merchandise cost—the department's "contribution" to the common operating costs and to net income, if any—to the general expense and revenue summary.

The trading margin in department A in the example is 17/35 or 48.57% of sales, while the corresponding showing for department B is 21/50 or 42%. This does not mean, however, that department A represents the more profitable line or that this class of merchandise is being handled more efficiently. It is quite possible that a sound distribution of the other operating costs (assuming that such a distribution might be made) would result in a higher percentage of earnings per dollar of sales for department B. Further, consideration would have to be given to the amount of capital assignable to each phase of the business in attempting to reach a decision as to relative profitableness of the two lines. Often there are so many common

factors and the various activities and decisions are so intimately connected that estimates of comparative earning power, no matter how carefully made, are bound to be highly arbitrary, and it would be unwise, even if possible, for the management to take decisive action based thereon.

In setting up summarizing merchandising accounts care should be taken to avoid obscuring the amount of cost of sales. This element may be determined for report purposes even if not isolated by ledger procedure, but it may still be urged that essential data should be emphasized in terms of adjusting and closing entries wherever this is convenient.

Continuous Inventory Procedure. Some form of continuous or "perpetual" inventory system is employed by many enterprises. In general such a system consists of a scheme of cards or sheets handled so as to show from day to day all acquisitions of merchandise, all withdrawals from stock, and balances on hand, in more or less detail. A distinction is often drawn between goods on hand in reserve stock and merchandise on the shelves or otherwise available for sale, and adequate classification by stores or departments as well as by types of merchandise is required. The inventory sheets proper must be supported by receiving records, bin tags, requisition slips, delivery and shipping records, and other necessary forms, and a procedure should be developed which includes adequate provision for internal check.

If the inventory system is tied in with the general records continuously (that is, from day to day) the credits to merchandise inventory control representing goods sold are currently charged to merchandise cost of sales, and the balance of the inventory account appearing in the trial balance at the close of the period represents the amount of merchandise on hand, according to the books, at the concluding date. The only adjustment required under these circumstances is that necessary to reconcile the amount of the periodic physical inventory with the book balance. Thus if the book inventory shows a balance of $50,000 while the amount on hand according to the periodic inventory is only $49,500, adjusting entries must be set up crediting inventory account and charging merchandise cost of sales with $500 (assuming that the amount of the discrepancy is viewed as an item of cost of sales rather than as a special loss). The use of a continuous book inventory, it should be under-

stood, does not eliminate the need for a periodic examination and compilation, and the results of the periodic inventory either verify or supersede the corresponding book figures. At the same time the process of taking and pricing inventory periodically is likely to be facilitated and abridged as a result of the use of the continuous inventory system.

Where a scheme of continuous inventory is in effect and the resulting credits to merchandise are regularly recognized in the general ledger the purchases account, if used at all, can best be employed merely as a current clearing account. That is, the amounts charged to the purchases account should be regularly transferred to the inventory control account.

If no entries are made in the general ledger until the close of the regular period, and after the trial balance is taken, the trial balance will show only the opening inventory and the purchases for the period and the adjusting and closing entries will take the same form as in situations where no continuous inventory plan is in operation. On the other hand it is quite possible to post the accumulated data of the continuous inventory at the end of the month as a part of the regular summarizing, before the trial balance is compiled.

Merchandise Shortages and Write-Downs. Merchandise may be lost or stolen, and shrinkage and waste from various causes are common. It may also be deemed necessary to place a value of less than cost on deteriorated and out-of-date goods on hand, or on standard merchandise on which prices have receded since purchase. An objection to the formula, "opening inventory plus purchases less closing inventory equals merchandise cost of sales," evidently arises in this connection. When the amount of the shortage or discrepancy is relatively small, and may be viewed as more or less typical or inevitable under prevailing conditions, there is no serious objection to a treatment which permits the item to be buried in merchandise cost of sales, as an incidental element of such cost; where the amount is large or at all exceptional, on the other hand, isolation of such charge is advisable and it may be viewed in whole or in part as a loss. Substantially the same position may be taken in the case of a write-down on shopworn or seasonal goods. (Here, however, even a relatively large adjustment downward might be permitted to swell merchandise cost of sales on the ground that it was necessary to carry a larger stock than could be sold during the season in order to main-

tain the volume of regular sales, and that the inventory adjustment at the end of the season was therefore a part of the total merchandise cost of sales made.) A definite write-down to cover a fall in the cost price of standard goods, it seems clear, should be segregated and excluded from merchandise cost of sales.

To illustrate adjustments for shortage and write-down assume that in the trial balance of the R Co. on June 30 the inventory at the beginning of the period (January 1) stands at $10,000 and the purchases account shows acquisitions for the past six months of $20,000. At this time the following supplementary data are determined: (1) inventory of goods on hand on a cost basis, $16,000; (2) write-down required on account of price declines, $1,000; (3) actual cost of merchandise sold and delivered, $13,500; (4) amount of merchandise shortage, $500. Recognizing the write-down and treating the shortage as a special deduction, the appropriate adjusting and closing entries, in summary form, are as follows:

Merchandise Inventory	$ 5,000	
Merchandise Cost of Sales	13,500	
Merchandise Write-Down	1,000	
Merchandise Shrinkage and Shortage	500	
Purchases		$20,000

The special accounts showing the shortage and write-down should be viewed as current loss items, to be closed to expense and revenue.

Problems of merchandise shrinkage and shortage require careful study and attention on the part of the management whether or not special adjustments covering the data disclosed are recorded in the general ledger. In this connection a thoroughgoing system of continuous inventory is helpful.

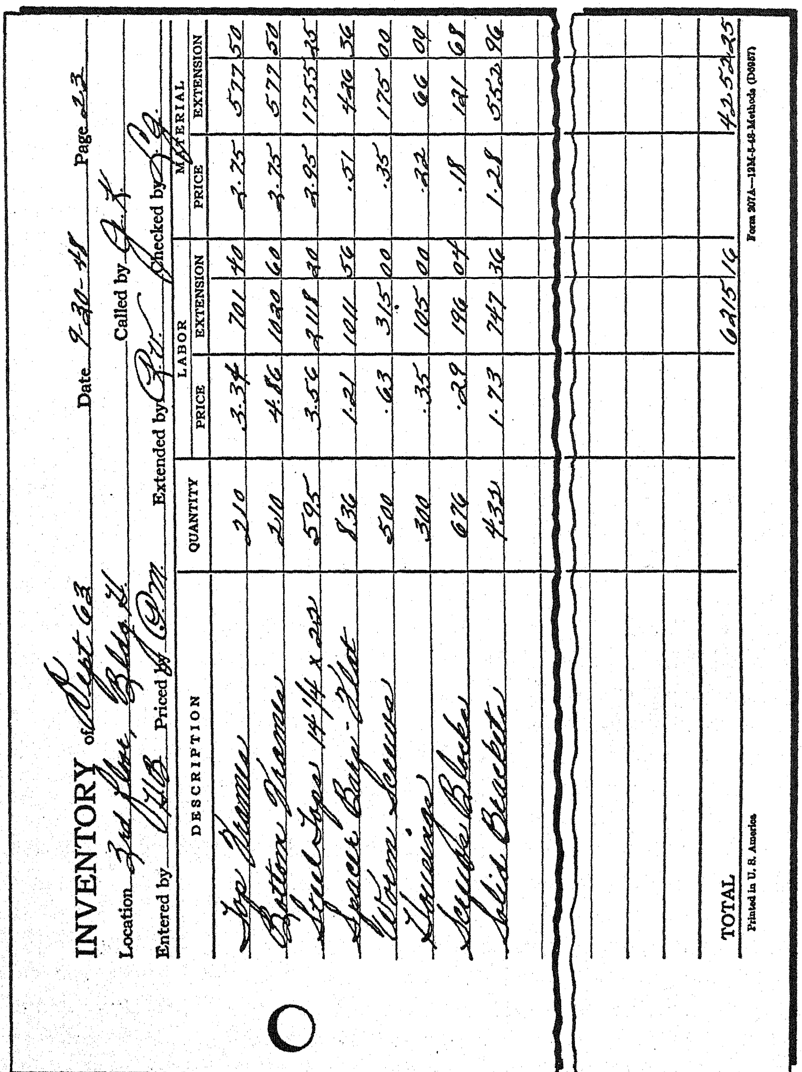
Periodic Inventory. Virtually all trading concerns require a complete periodic inventory. Maintaining a continuous inventory of all classes of merchandise is not a simple matter, particularly in the case of goods on the selling floor, and many concerns find it inexpedient to go beyond the day-to-day observation of stock, and compilation of physical quantities, necessary to the proper scheduling of purchases. Further, even in the case of the most highly developed systems of continuous inventory a periodic verification is essential. The questions of valuation policy arising in connection with the preparation of financial statements, moreover, can seldom be settled to advantage on the basis of the data furnished by the stores ledgers, with no

accompanying information such as is provided by a comprehensive survey of the current status of merchandise.

The frequency of the periodic inventory may well vary with the nature of the business and the special needs of the management. The complete annual inventory is in general the minimum requirement. In many concerns interim departmental inventories are regularly taken in addition to the comprehensive semiannual or yearly inventory. In extreme cases (particularly where unit values are high and there is danger of misappropriation) daily inventories of merchandise on hand are taken—a procedure which represents in effect a form of continuous inventory.

To minimize the extent to which regular operations are interfered with or interrupted, as well as to avoid an unreasonable direct cost of the work, the periodic inventory process should consume no more time than is essential to an accurate count and tabulation. Careful preparation is important in this connection. The entire process should be planned and instructions issued before the work begins; the necessary forms should be prepared, with all headings, in adequate supply; mechanical equipment to be used in measuring and in tabulating should be made available; storesrooms and other locations should be placed in good condition for the inventory; invoices and other papers affecting merchandise should be posted up to date in so far as possible. Of outstanding importance is the selection and organization of a competent force to do the work. Where there is a regular slack season or other periodic lull the inventory should be taken at such time provided the close of the accounting period falls therein. (In this connection is found one of the arguments for the adoption of the "natural business year" in lieu of the calendar year.)

The actual work of taking inventory should be directed by an owner, officer, or other responsible person or persons. In large enterprises, with a specialized administrative staff, the comptroller or chief accountant may well be placed in charge of the inventory. The work is ordinarily divided into two main steps or stages: (1) ascertaining the physical quantities; (2) summarizing and pricing. The first step involves counting, weighing, etc., and listing the results, with the proper descriptions, on cards or sheets. (See illustrative form on page 498.) The methods employed must of course be adapted to the conditions. Those taking the inventory often work in pairs as "counters" and "listers." The first task in pricing the inventory is the determination and listing of unit values. Where the



INVENTORY of Dept 63 Date 9-30-48 Page 23

Location 2nd Floor, Bldg. L Called by J. L.

Entered by [illegible] Priced by [illegible] Extended by [illegible] Checked by [illegible]

DESCRIPTION	QUANTITY	LABOR PRICE	LABOR EXTENSION	MATERIAL PRICE	MATERIAL EXTENSION
Top Frames	210	3.34	701 40	2.75	577 50
Bottom Frames	210	4.86	1020 60	2.75	577 50
Steel Tops 14 1/4 x 22	595	3.56	2118 20	2.95	1755 25
Spacer Bars-Flat	836	1.21	1011 56	.51	426 36
Worm Screws	500	.63	315 00	.35	175 00
Housings	300	.35	105 00	.22	66 00
Spindle Blocks	676	.29	196 04	.18	121 68
Lid Brackets	432	1.73	747 36	1.28	552 96
TOTAL			6215 16		4252 25

Printed in U. S. America

Form 207A—12M-5-48-Methods (D6957)

goods are marked with symbols which indicate the cost prices this information is listed on the original sheets; otherwise a special procedure must be developed for the purpose of determining the cost data. As a rule adjustments for transportation and handling charges are made by aggregates of particular sections of the inventory rather than in terms of the unit costs of particular items. It should be

recognized that the unit value adopted may not be actual cost. See following discussion of valuation bases.

After unit values have been ascertained and listed the sheets are turned over to machine operators for extending and tabulating. The final stage consists of recapitulation by main departments or classes on summary sheets.

Valuation of Inventory—Cost Basis. For many concerns inventory valuation is a major factor in the measurement of periodic income and the determination of financial position, and valuation policies and methods are therefore of marked interest to the accountant. As general bases or starting points in valuation there are three main alternatives: (1) actual recorded cost; (2) replacement cost; (3) sale value. In addition there is a compromise approach widely endorsed by accountants, "cost or market, whichever is lower."

Actual cost of merchandise should be defined as the net (cash) invoice price plus transportation and other applicable charges. (As explained earlier, many concerns fail to include handling and storing costs in inventory values.) The cost basis is particularly satisfactory from an income-statement standpoint. The inventory on this basis is conceived as a pool of costs applicable to future revenues, and hence is excluded from current cost of sales. Valuation at cost is the complement of the doctrine that revenue is measured by the volume of delivered sales. This point has especial force throughout the trading field, where the dominant activity—and hence the natural focus of income measurement—is selling merchandise. A minor consideration favoring the use of cost is found in the fact that in general costs represent values actually drawn from the records.

From a position-statement standpoint strict adherence to the cost basis may be objected to on the ground that cost may be either above or below market value on the closing date. This objection has force if the inventory is conceived as a source of immediate debt-paying power; it carries less weight in so far as the inventory may properly be viewed as an aggregate of costs incurred, legitimately deferred. Evidently the nature of the inventory, and the use to which the statement is put, must be considered in reaching a decision. A possible and often desirable procedure is to show estimated market value parenthetically in the statement of financial condition while cost is used as a basis for income measurement.

Cost valuations, it is sometimes pointed out, do not furnish proper

guidance to the management in periods of sharply changing prices. This consideration, not very significant in the case of fast-moving stock, has some merit where the period of production is sufficiently long, and the selling market is sufficiently sensitive, to make possible modifications of policy based on observation of the changing costs of goods on hand. It may be noted, however, that valuation at actual cost for periodic statement purposes does not preclude the furnishing of management with frequent analyses which emphasize immediate market prices.

General endorsement of cost valuations does not mean ignoring the fact that recorded cost is an unwarranted basis of pricing inventory in the case of obsolete and shop-worn merchandise and other special cases.

Use of Replacement Cost. Replacement cost of merchandise is measured by the current net invoice price, plus transportation and other applicable costs—the additional charges also being calculated on a current basis. With respect to net invoice price replacement cost is conventionally defined as the quoted cash price on the date of the inventory by the regular source of supply, in terms of the quantities regularly purchased. The principal arguments in support of this basis are those which are offered in opposition to the use of historical cost. In the case of standard goods, with selling prices sensitive to changes on the buying market, the current replacement cost generally represents the most satisfactory evidence of market value viewed through the eyes of the buyer. Likewise replacement costs are in general the most significant cost data for those who are planning a sales program for standard merchandise on hand. It is sometimes further urged, with substantial justification, that replacement cost is a more reasonable measure of *actual* cost, in the sense of economic power expended or sacrifice made, than is recorded dollar cost in situations in which there has been a change in the general price level—and hence in the value of the dollar—between date of acquisition and date of inventory.

The most common objection offered to the consistent use of replacement cost in pricing inventory is that such valuation will result in effect in the booking of unrealized income where replacement cost is higher than actual cost. This objection, long emphasized by accountants, has some force; in general postponement of formal income recognition until conversion of merchandise into accounts

receivable or cash is desirable. On the other hand the point hardly justifies universal condemnation of replacement cost as a basis of valuation, particularly in view of the inherent limitations of conventional accounting concepts and procedures in the face of changing prices.

Estimating Invoice Cost. The fact that it is often not feasible to mark merchandise piece by piece with invoice prices (or symbols permitting identification in terms of particular invoices), coupled with varying prices during the period in which the inventory is accumulated, makes necessary the adoption of some systematic method of estimating the invoice cost of goods on hand. The weighted-average method is one device employed in this connection. For example, during the first month of operation the M Co. buys a particular class of merchandise in four lots, as follows:

Date	*Quantity*	*Price*	*Amount*
Jan. 5	1,000	$ 2.00	$ 2,000
12	5,000	1.95	9,750
20	2,000	1.95	3,900
30	3,000	2.10	6,300
	11,000		$21,950

The physical inventory at the end of the month is 6,000 units. Under these conditions the average cost per unit is approximately $1.9955 ($21,950 divided by 11,000) and the cost of goods on hand based on this average is $11,973. For the following month this inventory amount represents the first lot and must be taken into account in calculating the next average price.

This method assumes that goods as sold are taken from stock in exact proportion to the quantities of the various lots comprising stock at the moment of sale, including the opening inventory as the first lot. As a matter of fact it would be impossible for the movement of goods to conform to this pattern, as this would mean that no batch or shipment could ever be completely closed out, and no type of merchandise is indefinitely divisible. From a practical standpoint, however, this logical weakness in the scheme is not a serious defect, particularly where the turnover per period is high.

Another method of estimating invoice cost is based upon the assumption that goods sold are always taken from the oldest in stock or, in other words, that the goods on hand consist of those most recently acquired. The method is commonly referred to as the

"first-in, first-out" plan, or "FIFO." By this approach the invoice cost of the periodic inventory, class by class, is computed by accumulating the entries on the stores sheets, beginning with the latest, for both physical quantities and costs, in an amount sufficient to absorb the inventory quantities. Using the figures of the preceding example, and applying this method, the invoice cost of the 6,000 units on hand is found as follows:

Date	*Quantity*	*Price*	*Amount*
Jan. 30	3,000	$ 2.10	$ 6,300
20	2,000	1.95	3,900
12	1,000	1.95	1,950
	6,000		$12,150

The result is a figure of $12,150 as compared with the amount of $11,973 found by the use of the weighted-average method.

For most situations the first-in, first-out procedure is to be preferred to all other methods of estimating invoice cost of inventory. The main advantages are:

1. The inventory is drawn from the actual records in a systematic manner.
2. The result is clearly a cost value, with no recognition of unrealized gain or loss, but is nevertheless a reasonable measure, in most cases, of the current market valuation.
3. The assumed movement of goods—a continuous, orderly stream—represents a condition to which the management should adhere as closely as possible, particularly in the case of goods subject to deterioration and style changes.

A third possible method of estimating cost of sales and cost of goods on hand is the "last-in, first-out" approach, or "LIFO." Under this approach the cost of the inventory is assumed to consist of the oldest charges represented in the existing accounts and cost of sales is accordingly assumed to be made up of the latest costs incurred. The peculiar merit of "LIFO," it is contended, is the minimizing of the effect of price movements in the periodic reports. When prices are advancing sharply the charging of the latest acquisitions to cost of sales evidently tends to increase cost of sales and reduce net, and when prices are falling the same procedure has the effect of lowering cost of sales and improving the operating showing. This statement of the support for the method reveals the principal line of objection to it: it tends to bring about an appearance of stability where there

is actual fluctuation. This, it can be argued, is the very antithesis of sound accounting. The purpose of the particular income report is to show the results of business operation as brought about by the impinging conditions of the particular period—and not the results of an average or "normal" year. Moreover, the procedure is objectionable in that the movement of goods seldom if ever corresponds even roughly to the underlying assumption, and it would be very poor operating policy to attempt to handle goods on a LIFO basis.

"Cost or Market, Whichever is Lower." This is a compromise formula, a rule of conservatism, rather than an independent basis of valuation. Through its use earnings not realized by sale are in general excluded from the income report while unrealized losses—in the form of falling cost values of goods on hand—are taken into account, usually in the form of an increase in the recognized merchandise cost of sales. By "market" in this connection is generally meant the estimated cost of replacement, although some accountants define market as estimated net selling value where this figure is lower than either recorded cost or replacement cost.

The thoroughgoing use of this basis requires the ascertaining of both actual cost and replacement cost or "market" for each item of the inventory appearing on the underlying cards or sheets. For a large inventory this is a very considerable task, and herein lies a serious weakness of the basis from a practical standpoint.

"Cost or market, whichever is lower," notwithstanding its wide adoption in some form in practice, is an illogical approach to inventory valuation, a fact which becomes very apparent when the effect on the periodic income report is considered. Assume, for example, that during the first period of operation of the M Co. 1,000 units of merchandise are purchased at a cost of $50 each and that at the end of the period 600 units remain on hand. Assume, further, that toward the end of the period there has been a sharp decline in the market and that replacement cost for the class of goods in question on the closing date is $45 per unit. If cost is accepted as the basis of valuation under these conditions the amount of the inventory is $30,000 and merchandise cost of sales is $20,000. If replacement cost (under the "cost or market" rule) is used the amount of the inventory becomes $27,000 and merchandise cost of sales (including the item of unrealized loss) is increased to $23,000. The effect of the appli-

cation of the compromise rule, as compared with the use of actual cost, clearly, is to reduce operating net (or increase the net loss) by \$3,000—a gesture of conservatism. The effect upon the accounts in the following period, however, is in the opposite direction. The use of an opening inventory figure of \$27,000 in lieu of a figure of \$30,000 has the effect of *adding* \$3,000 to the operating net (or deducting \$3,000 from the net loss) of such second period, as this net would stand if actual cost prices were used throughout.

The juggling of operating net between periods through the application of "cost or market, whichever is lower" to the inventories may be so marked in periods of sharp price movements as to make the course of net income from month to month or quarter to quarter, as shown by the comparative operating statement, move contrary to the volume of business, with the result that the comparative data are downright misleading.

The vogue of "cost or market, whichever is lower" was fostered in considerable measure by overemphasis, in earlier days, on the statement of financial condition as opposed to the income statement. That it is bad reporting to overstate asset values in the position-statement may be taken for granted, but the adoption of "cost or market" is a very clumsy and ineffective way of attempting to avoid such overstatement. From the standpoint of the presentation of income reports useful to operating management the rule is a nuisance rather than a bit of business wisdom. Fortunately there are some signs that the enthusiasm for this approach to inventory valuation is waning.

Use of Selling Value. For standard merchandise the valuation of inventory at unadjusted selling price is indefensible, as this would mean in the typical case the recognition of unearned as well as unrealized income. On the other hand, current selling prices are sometimes useful as a starting point in the determination of estimated cost values. For example, under the so-called "retail method" of pricing, employed by many department stores, the inventory is first tabulated in terms of listed selling prices, by classes or departments, and the final inventory figures are determined by deducting mark-up in each case from the preliminary total.

Net selling value (current selling price less estimated costs to be incurred) is often employed in the valuation of damaged and deteriorated merchandise, and left-over stocks of seasonal goods. The use of

this basis in these special cases assumes that any loss involved has already been suffered and that no income will be realized through the process of sale—a position not altogether reasonable. An alternative and somewhat more logical treatment would be to price the goods at net realizable value less a reasonable profit to cover the process of merchandising from the point of inventory. From the standpoint, in particular, of those in charge of special sales the accounts should not be handled in such a way as to make it impossible to show earnings from such activities.

Inventory Verification. Taking and pricing the inventory is a complex task, fraught with the possibility of questionable procedures and errors. Mistakes may be made in the count itself, and in calling and writing. Clerical blunders and errors in judgment in classifying and tabulating, and in ascertaining and applying unit values, are not easily avoided throughout a large inventory.

Assuming complete integrity of the inventory process per se there remains the problem of reconciliation of inventory and book figures. Discrepancies may be due to unrecorded invoices, errors in transferring invoice data to stock cards, mistakes in compiling and pricing requisitions and shipping orders, or to shrinkage, breakage, theft, etc. On the other hand, the difference between the periodic totals and the book balances of a continuous inventory system may be largely the result of either questionable or legitimate variations in policies of valuation.

In view of these conditions the public accountant charged with verifying and reconciling the inventory faces a formidable task, and his efforts are usually confined to a study of procedure followed together with a testing of the accuracy of the processes of physical measurement and pricing. The usual program of "auditing" the inventory emphasizes the following:

1. Study of all special or irregular conditions, including goods in transit or consigned, merchandise pledged, C.O.D. shipments, goods delivered under conditional sales contracts, damaged and obsolete merchandise, broken lots, etc.
2. Careful checking of purchases and withdrawals occurring shortly before or after date of inventory.
3. Examination and verification of price lists; study of discount practices, returns, transportation and storing costs.
4. Testing of stores records and requisitions; study of methods of accumulating and applying labor and overhead costs and reasonable testing of accuracy of cost records.

5. Examination and testing of original inventory cards and sheets and proving of final tabulations and summaries, particular attention being given to large items, footings, and unusual classifications.

6. Examination of last preceding inventory data and comparison with current figures; observation of relations of purchases, cost of sales, inventory, and sales data, by departments and for enterprise as a whole; consideration of general valuation bases and procedures.

7. Obtaining full explanations and formal certificates from employees responsible for work of taking and pricing, and for regular work of storeskeeping and costing.

A program of inventory verification for the traveling auditor, employed by the large company to make periodic visits to particular plants and divisions, follows similar lines.

These suggestions apply to the inventories of manufacturers as well as to those of merchandising concerns.

Merchandise Turnover. By "turnover" in general is meant the number of times the amount of the average or normal stock of goods in a given situation is replaced during a particular period. It is usually computed in value terms, although where prices are moving sharply value turnover is likely to be misleading. Computation of turnover in physical terms, evidently, is possible only for each homogeneous class of goods, taken separately. Turnover ratios are particularly useful in determining inventory requirements, in focusing attention on slow-moving and excessive stocks, and in comparing periodic performances. As a rule a series of short-term turnover ratios is more significant than yearly figures.

Merchandise turnover is commonly calculated by dividing merchandise cost of sales by the average inventory. Ideally the inventory figure used in the computation should be an average of daily balances, rather than the simple average of opening and closing inventories, as otherwise sharp seasonal or other fluctuations in stock will not be taken into account properly. In some retail lines, especially where the retail method of taking inventory is employed, turnover is referred to as the "stock-sales ratio" and is ascertained by dividing sales by average stock priced at retail.

Turnover rates vary between concerns and between classes of goods in the same industry. In a furniture store or department, for example, one expects to find a lower turnover than in a grocery store or department. There may also be a seasonal variation in the turnover of the particular department or type of merchandise. In setting standards such considerations must be taken into account. It

must also be remembered that a variation from standard, although affording a basis for investigation, does not demonstrate either a satisfactory or an unsatisfactory operating situation. Failure to reach the standard set in the particular department or business may be due to excessive buying or slackening sales effort, conditions subject to improvement, or it may be the result of some special and temporary factor such as purchase of a large supply at bargain prices or reduction in selling time due to occurrence of several holidays in the particular period. Similarly, if performance in a particular period exceeds the established standard the cause may be found in better buying and handling, or improved sales management, conditions deserving commendation and support, or in such circumstances as unusually low stock or temporary expansion of volume.

Questions

1. Illustrate the two forms of adjusting and closing entries which are applicable to situations in which current acquisitions of merchandise are charged to a "purchases" account.

2. Illustrate the proper treatment of costs of transporting, handling, and storing merchandise. Why is it not feasible to "force all operating charges through the merchandise funnel, registering a precise division for each cost incurred between periodic inventory balances and cost of sales"?

3. Using the example given on page 489 open skeleton accounts for purchases and purchase adjustments and display all entries for the period.

4. Open skeleton sales and sales adjustment accounts and record the entries covering the example on pages 490–491.

5. Open skeleton accounts and post the entries covering the data of the illustration given on pages 492–493. What is meant by "trading margin"?

6. "In setting up a summary trading account the proper procedure is to close initial inventory, purchases, purchase adjustments, sales, and sales adjustments directly to the summary, and to establish the new inventory by a credit thereto. The gross profit is then transferred to expense and revenue." Do you agree? Explain.

7. Outline the procedure required in connection with a system of continuous inventory. Illustrate the recognition of merchandise shortage and write-down.

8. Why is the complete periodic inventory needed? Outline the process.

9. What are the merits of the cost basis of pricing inventory? The objections?

10. Define replacement cost in relation to inventory valuation. What is the most common objection offered by accountants to the consistent use of this basis of pricing?

11. Under what conditions must the actual invoice cost of merchandise on hand be estimated? Illustrate and appraise the weighted-average and first-in, first-out methods of estimating.

12. Criticize the last-in, first-out interpretation of the movement of goods as a means of finding the cost of the inventory.

13. What are the objections to the use of the rule of "cost or market, whichever is lower," in inventory valuation?

14. Discuss the use of selling prices in connection with the valuation of inventory.

15. Outline a program of procedure with respect to the inventory for an accountant making a periodic audit.

16. Illustrate the computation of merchandise turnover

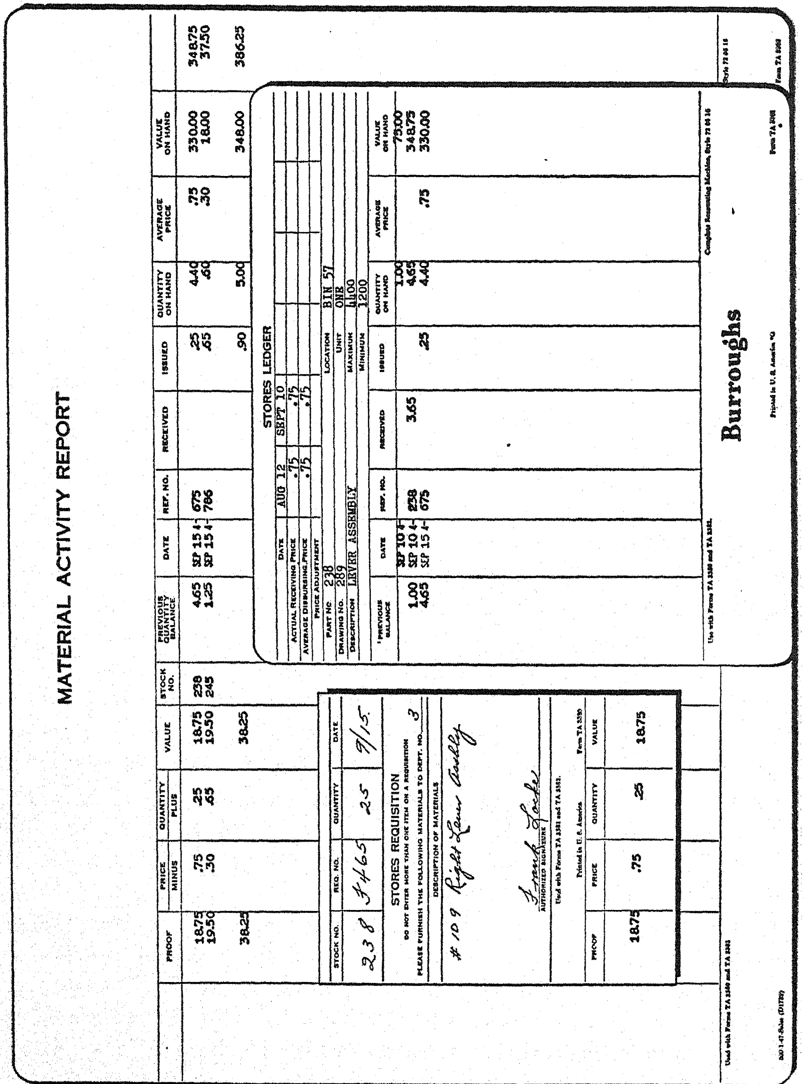
XXVI

MANUFACTURING ACCOUNTS

Factory Materials and Supplies. The operations of receiving, storing, and issuing materials and supplies in manufacturing plants are controlled and recorded substantially as are the corresponding activities in trading enterprises. Storeskeeping in manufacturing, however, is in general somewhat more highly developed than in the trading field, particularly to meet the requirements of the system of cost accounting employed. Materials as received and stored are charged to the appropriate detailed accounts of the stores ledger (see illustrative form on page 510), which is controlled by one or more accounts in the general ledger. Materials are issued only on the basis of properly authorized requisitions (see form on page 510), which are posted in detail to the issued section of the underlying stores accounts and which are recapitulated from time to time to furnish credits to materials in the general ledger. The problem of pricing requisitions, one of the difficult matters in accounting for materials and supplies, is discussed briefly in the following section. In large concerns, handling hundreds of classes of materials, the work of storeskeeping and of maintaining the necessary records in first-class condition is a considerable task.

The amounts of materials and supplies issued are in general debited either to production cost accounts (in terms of particular production orders, particular departments, particular operations, periods of time, or on some other basis) or to accounts representing indirect or overhead costs which may in turn be charged in whole or in part to production costs on the basis of appropriate methods of distribution. (There is also the possibility of issuing materials on construction jobs.) The underlying production cost sheets or accounts (see example of form on page 511) are usually controlled in

the general ledger either by a single account, "work in process," or by three main accounts, "materials in process," "labor in process,"



MATERIAL ACTIVITY REPORT

PROOF	PRICE MINUS	QUANTITY PLUS	VALUE	STOCK NO.	PREVIOUS QUANTITY BALANCE	DATE	REF. NO.	RECEIVED	ISSUED	QUANTITY ON HAND	AVERAGE PRICE	VALUE ON HAND	
18.75	.75	.25	18.75	238	4.65	SEP 15 4-	675		.25	4.40	.75	330.00	348.75
19.50	.30	.65	19.50	245	1.25	SEP 15 4-	786		.65	.60	.30	18.00	37.50
38.25			38.25						.90	5.00		348.00	386.25

STORES LEDGER

DATE	AUG 12	SEPT 10
ACTUAL RECEIVING PRICE	.75	.75
AVERAGE DISBURSING PRICE	.75	.75
PRICE ADJUSTMENT		

PART NO. 238 — LOCATION BIN 57
DRAWING NO. 289 — UNIT ONE
DESCRIPTION LEVER ASSEMBLY — MAXIMUM 4400 — MINIMUM 1200

PREVIOUS BALANCE	DATE	REF. NO.	RECEIVED	ISSUED	QUANTITY ON HAND	AVERAGE PRICE	VALUE ON HAND
	SEP 10 4-				1.00		75.00
1.00	SEP 10 4-	238	3.65		4.65		348.75
4.65	SEP 15 4-	675		.25	4.40	.75	330.00

Burroughs

STORES REQUISITION

STOCK NO.	REQ. NO.	QUANTITY	DATE
238	F465	25	9/15

PLEASE FURNISH THE FOLLOWING MATERIALS TO DEPT. NO. 3

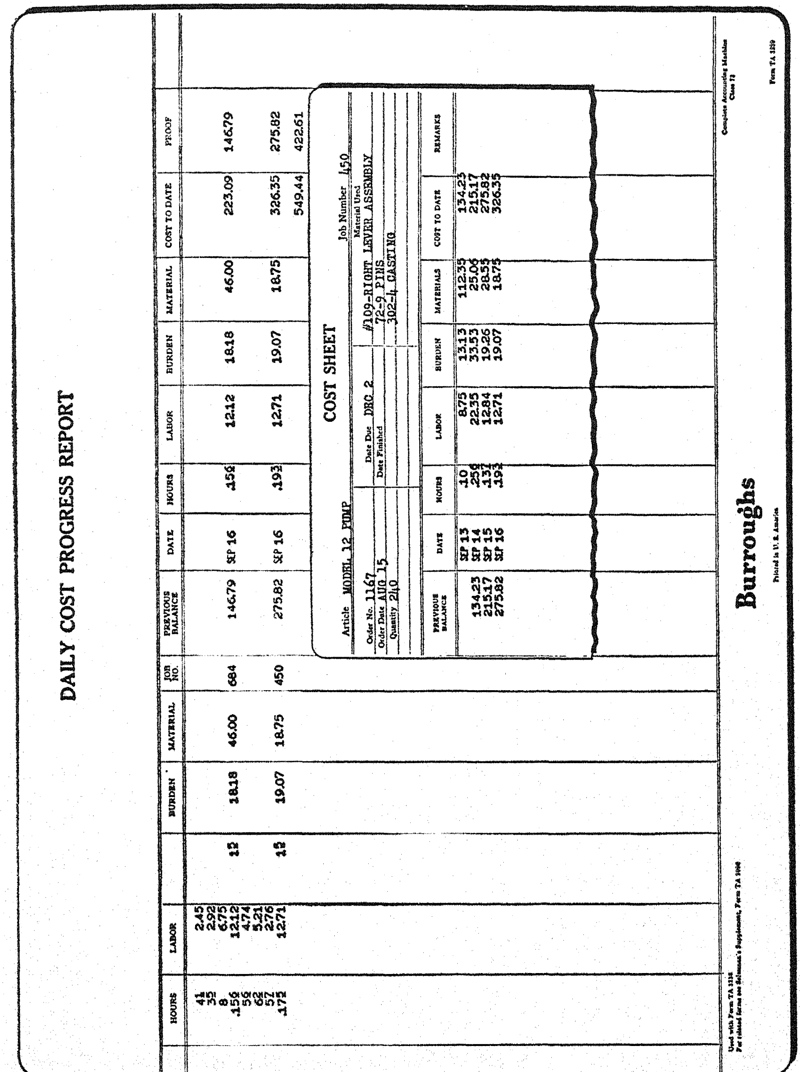
DESCRIPTION OF MATERIALS: #109 Right Lever Assembly

Frank Locke — AUTHORIZED SIGNATURE

PROOF	PRICE	QUANTITY	VALUE
18.75	.75	.25	18.75

and "burden in process." Where materials are issued in excess of requirements and are returned to stores in good condition material credit slips (see form on page 512) are prepared which form the

basis of reversing entries. Scrap and spoiled materials returned are charged to stores at estimated value, and manufacturing overhead is



DAILY COST PROGRESS REPORT

HOURS	LABOR		BURDEN	MATERIAL	JOB NO.	PREVIOUS BALANCE	DATE	HOURS	LABOR	BURDEN	MATERIAL	COST TO DATE	PROOF
41	2.45												
35	2.92												
8	6.75												
.156	12.12	12	18.18	46.00	684	146.79	SEP 16	.156	12.12	18.18	46.00	223.09	146.79
56	4.74												
62	5.21												
57	2.76												
.172	12.71	12	19.07	18.75	450	275.82	SEP 16	.193	12.71	19.07	18.75	326.35	275.82
												549.44	422.61

COST SHEET

Article MODEL 12 PUMP Job Number 450

Order No. 1167 Date Due DEC 2 Material Used #109-RIGHT LEVER ASSEMBLY

Order Date AUG 15 Date Finished 72-9 PINS

Quantity 240 302-4 CASTING

PREVIOUS BALANCE	DATE	HOURS	LABOR	BURDEN	MATERIALS	COST TO DATE	REMARKS
	SEP 13	.10	8.75	13.13	112.35	134.23	
134.23	SEP 14	.256	22.35	33.53	25.06	215.17	
215.17	SEP 15	.137	12.84	19.26	28.55	275.82	
275.82	SEP 16	.193	12.71	19.07	18.75	326.35	

Used with Form TA 1138
For related forms see Salesman's Supplement, Form TA 1000

Burroughs

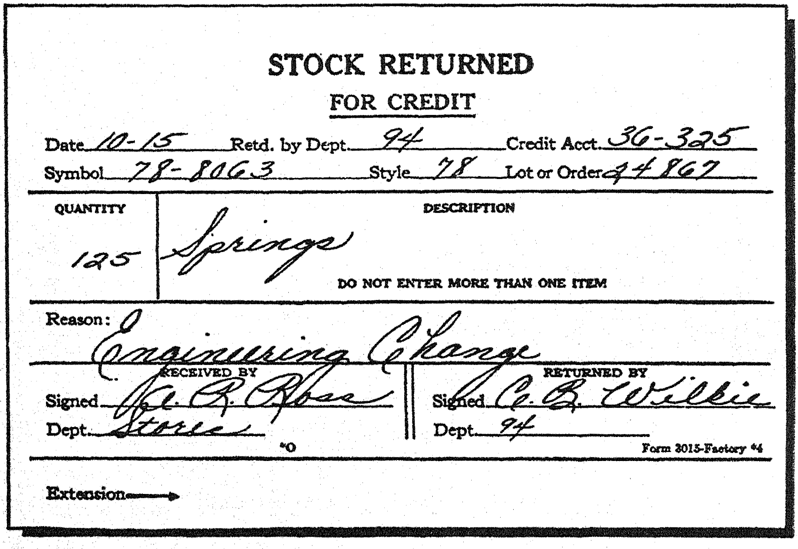
Printed in U. S. America

Complete Accounting Machine Class 73

Form TA 1159

charged with the excess of cost or issue price over such value. In extreme cases spoilage may be viewed as an outright loss rather than as an element of overhead cost.

As in the case of merchandise, all transportation costs incurred in the acquisition of materials and supplies are clearly a part of the cost of materials and ideally all handling and storage costs should be similarly treated. As indicated earlier, however, the distribution of such charges to the numerous accounts represented in the stores ledger may require an unreasonable amount of both estimating and clerical work, and accordingly these collateral costs are often included in manufacturing overhead and applied to the product in proportion to the amount of material cost involved. Even under this procedure it is desirable to include an appropriate amount of trans-


STOCK RETURNED
FOR CREDIT

Date 10-15 Retd. by Dept. 94 Credit Acct. 36-325
Symbol 78-8063 Style 78 Lot or Order 24867

QUANTITY	DESCRIPTION
125	Springs

DO NOT ENTER MORE THAN ONE ITEM

Reason: Engineering Change

RECEIVED BY	RETURNED BY
Signed W. R. Ross	Signed C. B. Wilkie
Dept. Stores	Dept. 94

Form 3015-Factory 4

Extension→

portation and storing charges in the periodic inventory, in particular to avoid the distortion of operating results which may otherwise arise, especially where monthly statements and reports are issued. A special account may be set up as an adjunct to the main materials control to show the amount of such charges applied to the inventory, so that the subsidiary ledger and its control will remain in balance.

Pricing Requisitions. Many concerns use some form of average cost in pricing materials and supplies from stores. Under a common procedure a new average unit cost is computed whenever an increment of materials is added to stock (excepting the rare case where the unit price of the incoming lot happens to be the same as the current

weighted average) and this cost figure is applied to all requisitions filled prior to date of receipt of the next shipment.

In pricing issues by the first-in, first-out method each requisition is assumed to be filled from the oldest materials of the class in stock. For example, the receipts section of a particular stores account shows the following data for January:

Date	*Quantity*	*Unit Cost*	*Amount*
Jan. 1 (Bal.)	1,000	$ 2.00	$ 2,000
15	500	2.10	1,050
23	1,500	2.15	3,225

The issues section of the card for the same period shows that four requisitions (or groups of requisitions) are filled and recorded as follows:

Date	*Quantity*	*Issue Price*	*Amount*
Jan. 8	500	$ 2.00	$ 1,000
15	400	2.00	800
22	500 {100	2.00	200
	400	2.10	840
29	800 {100	2.10	210
	700	2.15	1,505

The balance at this point, evidently, is 800 units priced at $2.15 each.

See discussion of methods of estimating invoice cost in preceding chapter.

Materials and Supplies—Illustrative Entries. To illustrate the general accounting treatment of materials and supplies, including typical adjustments, assume that the M Co. on June 1 has an inventory of manufacturing materials and supplies amounting to $21,000 (including handling and storing costs, $1,000) and that the record of materials during June is as follows: (1) acquisitions, $10,000; (2) materials requisitioned and charged directly to cost sheets, $12,000; (3) materials and supplies issued and charged to manufacturing overhead, $2,000; (4) direct materials returned in good condition, $500; (5) damaged direct materials returned, estimated stores value of $100 and issue price of $300; (6) handling and storing costs incurred applicable to materials and supplies, $500; (7) inventory of materials and supplies on June 30, including returned materials at the figures given above, but with no estimate of handling and storing costs included, $16,500. The summarized entries in the general ledger are as follows:

(1)

Materials and Supplies	$10,000	
Accounts Payable		$10,000
To record purchases for June		

(2)

Materials in Process	12,000	
Materials and Supplies		12,000
To record direct materials requisitioned		

(3)

Manufacturing Overhead	2,000	
Materials and Supplies		2,000
To record indirect materials requisitioned		

(4)

Materials and Supplies	500	
Materials in Process		500
To record returns of materials in good condition		

(5)

Materials and Supplies	100	
Manufacturing Overhead	200	
Materials in Process		300
To record returns of damaged materials		

(6)

Handling and Storing Costs	500	
Payrolls (and other accounts affected)		500
To record handling and storing costs for June		

(7)

Manufacturing Overhead	100	
Materials and Supplies		100
To recognize inventory shortage		

A few comments on the above entries are needed. Each charge or credit to materials and supplies, it should be recalled, is supported by detailed entries in the sheets or cards representing the stores ledger. Similarly, entries in materials in process are duplicated, in detail, on the underlying production accounts or cost sheets. Manufacturing overhead should also be thought of as a controlling account, supported by a classification of subsidiary operating accounts. The amount of the inventory shortage or write-down is found by comparing the inventory as determined at the close of the period, $16,500, with the book inventory of $16,600 (opening inventory of $20,000, exclusive of handling and storing costs, plus purchases of $10,000, less requisitions of $14,000, plus materials returned to stores of $600). All of the entries shown other than those representing purchases and handling and storing costs incurred, it may be added, might be recorded in the general ledger at the end of the month on the basis of underlying compilations maintained during the month

and the concluding inventory. On the other hand all of these entries with the exception of those based on the final inventory might represent the totals of daily or weekly postings.

In addition entries are required to reflect the application of handling and storing costs to operating accounts. Assuming that a proper adjustment is 5% of amounts of direct and indirect materials as originally requisitioned, without regard to adjustment for returns or inventory shortage, the appropriate entries are as follows:

Materials in Process	$600	
Manufacturing Overhead.	100	
Handling and Storing Costs		$500
Inventory Adjustment—Handling and Storing Costs . . .		200

This procedure assumes the use of a supplementary inventory account, with a balance of $1,000 at the beginning of the period. The resulting balance in this account on June 30 is $800, and the final inventory total is accordingly $17,300 ($16,500 plus $800). If it were desired to adjust the amount of handling and storage costs applicable to the concluding inventory to precisely 5%, or $825, this might be done by crediting materials in process with $40 (5% of $800), debiting manufacturing overhead with $15 (5% of the amount of $300 charged to this account to represent loss on damaged goods returned plus general shortage), and debiting the inventory adjustment account, $25. As a rule it would not be expedient to attempt a precise adjustment of this character, particularly in view of the difficulty of making the correction in terms of the supporting cost sheets.

It is hardly necessary to say that purchases of factory materials, like merchandise purchases, are subject to adjustments for returns, allowances, discounts, and other factors. See Chapter XIV.

Labor Cost. As in the case of materials there are two main classes of labor costs in factory operations. One is "direct labor," the cost of the services of employees engaged in the actual processes of fabrication or production; the other is "indirect labor," and includes the wages and salaries of supervisors and others who are associated with manufacturing operations in a more general or indirect capacity. The plant payrolls are accordingly compiled in terms of these two broad divisions, as well as by departments and other necessary classifications. Direct labor is chargeable immediately to work in process, or to the general subdivision, labor in process, and to the labor section of the underlying cost sheets. Indirect labor is chargeable to

manufacturing overhead in the general ledger and to the appropriate subsidiary accounts. In each case a temporary clearing account may be used if desired to receive the charges. The original sources of data in the compilation and classification of labor costs are clock cards, time tickets, and related types of records. In large companies, employing many hundreds or even thousands of workers, accounting for payroll cost requires an elaborate procedure and a system of specialized forms. The procedure is complicated by the required withholding of taxes on employees and other special deductions. See discussion of this topic in Chapter XV.

The principal adjustment with respect to labor cost at the close of the accounting period is the accrual of payroll to date, and wherever the cost system in use requires a daily recognition of labor charges and payroll liabilities incurred in the general ledger the trial balance taken at the close of any day's business is complete at this point and requires no adjustment. In most concerns accruals are not booked daily for all classes of manufacturing labor and periodic adjustments are required. To illustrate assume that on June 1 the accrued factory payroll account of the M Co. shows a credit balance of $1,500, and that during June regular payrolls are made up totaling $25,000 (direct labor, $20,000, and indirect labor, $5,000) and payments are made to employees on payroll account amounting to $26,500. Assume, further, that since June 30 comes on Thursday, and payrolls were last compiled for the preceding Saturday, it is necessary to accrue labor costs for the first four days of the week (including any charges incurred on Sunday) in the amount of $3,500, of which $2,800 is direct labor and the balance indirect. In this situation the entries to June 25, in summary form, would be as follows:

(1)

Labor in Process	$20,000	
Manufacturing Overhead	5,000	
Factory Payroll		$25,000

(2)

Factory Payroll	26,500	
Bank (or a special payroll fund)		26,500

The adjusting entries on June 30 take the form of a regular payroll accrual:

Labor in Process	$2,800	
Manufacturing Overhead	700	
Factory Payroll		$3,500

If a temporary clearing account is used to receive labor charges pending preparation of the distribution, entries must be made at the end of the period to close out any balance appearing in such account.

The amount of the employer's contribution to private pension funds, and to governmental funds in the form of payroll taxes, should in general be included in direct and indirect labor costs, and an adjustment should be made at the close of each accounting period, in terms of the arrangement in effect, to cover any accrued charge which has not been recognized. (Under an alternative view payroll taxes are treated as a part of the tax burden, and are excluded from labor cost.) There is also something to be said for the assignment of compensation insurance to labor costs.

Overhead Costs in Manufacturing. The central problem in factory cost accounting is the treatment of overhead or burden costs (sometimes labeled "manufacturing expense"). The term "overhead" is usually considered to cover all those costs that are necessary to the productive process as a whole but which are not incurred specifically for any particular operation or unit of output. The overhead costs are the "indirect" costs as opposed to the "direct" or "prime" costs of production—those charges which have definitely observable and traceable technical connections with specific activities and results. Indirect labor, as indicated above, represents one broad type of factory overhead cost. Examples falling roughly under this head are the wages and salaries of foremen, inspectors and supervisors, watchmen, elevator and door men, oilers and cleaners, engineers and draftsmen, machine and tool repair force, medical and welfare staff, factory clerical employees, etc. Types of supplies often included under overhead are coal and other fuels, lubricants, maintenance materials, clerical supplies, laboratory and testing supplies, dispensary and hospital supplies, etc. Utility services such as electric power and water service are usually viewed as overhead items. Important examples of the so-called "fixed charges" in overhead are depreciation (on buildings, machinery, motor equipment, tools, etc.), rent, casualty and liability insurance, and taxes (especially local, county, and state). Normal losses due to defective materials, spoiled work, idle time, etc. are also usually treated as an element of overhead cost. In fact overhead cost conventionally covers the entire range of manufacturing cost other than the raw materials used in making the

product and the wages of workers directly engaged in the process of fabrication.

Relation of Overhead and Direct Costs. The distinction between overhead and direct costs should not be overemphasized. Both types of cost are equally necessary and equally significant in their influence on results. Further, the line drawn is often largely one of convenience. Thus small items of direct materials such as nails, bolts, and the like are sometimes included in manufacturing overhead and the wages of operatives performing some minor task on numerous jobs are often similarly treated. Much of the so-called "overhead" in the typical enterprise may be converted into direct charges if sufficient attention is given to the problem. Such a cost, for example, as depreciation of a factory machine which is employed directly in the fabrication of product is evidently a direct cost of the units of output to which it contributes throughout its useful life. In general it is the aim of the cost accountant to treat as direct costs all elements of overhead, broadly defined, which can reasonably be subjected to such treatment.

A significant feature of overhead cost as opposed to direct cost is the comparative inelasticity of this broad class of charges. Within wide limits direct material costs vary in proportion to manufacturing activity and output (ignoring such points as the fact that low unit costs are often associated with purchases in large quantities and that the percentage of waste and spoilage may increase under the strain of maximum activity). Direct labor costs also vary with production, although in general such costs are less flexible than material costs due to the importance of maintaining an established working force from the standpoint of immediate operating efficiency as well as on account of the considerations of human welfare involved. An overhead charge such as depreciation, on the other hand, varies with production only to a minor degree, particularly with respect to the amount of loss of value resulting from obsolescence and related causes as opposed to the influence of ordinary wear and tear. (Under certain methods of apportioning depreciation, it is true, the amount of the periodic charge is made to vary with output.) Rent, insurance, and property taxes likewise are relatively inflexible charges. Supervisory and administrative wages and salaries, light and heat, maintenance charges, engineering costs, and numerous other types of overhead vary with manufacturing activity but not

proportionately. Some of the so-called overhead items, however, are highly elastic. The fluctuation of electric power used, for example, commonly follows the movement of general plant activity quite closely.

It is worth while to recognize that the distinction between fixed and variable operating costs is a product of the analysis of business activity in terms of relatively short periods of time. From a long-run standpoint all charges vary with the size of the enterprise and the volume of production.

Assignment of Overhead Costs—Defining Departments. As has been emphasized in earlier chapters, the initial stage of cost recording, an important phase of day-to-day accounting procedure, is the booking of costs as incurred. At this stage costs are often classified by kind or class without much regard to their significance in the internal process of operation. In this connection such account titles as "materials," "supplies," "electric power," "insurance," "rent," and "taxes" are often employed—titles which have no departmental implications. It has also been pointed out that costs incurred are subject to more or less reclassification, as they pass through the enterprise on their way to elimination as expenses or losses, for the purpose of disclosing important functional and departmental data. In some cases classification in kind may be combined at the outset with a functional distribution of charges, but even where this is done in some measure there often remains the task of internal distribution and assignment at various points.

This problem of periodic allocation of operating costs is present in various forms throughout the field of business but is evidently especially difficult and important in the case of manufacturing overhead. The first step is the analysis of the process of manufacture into cost centers or departments around which costs—both direct and indirect—may be appropriately collected. In general two main types of such departments are recognized: (1) production departments; (2) service departments. The first class includes all operations which represent actual work upon the product; the second class covers those departments which are engaged in rendering services to other centers rather than in direct production—such as storesroom, power plant, repair department, cost department, etc. A department for cost purposes should be defined particularly in terms of function or type of service, and may or may not have a separate physical location and a distinct

administrative head. In some cases an overhead cost center or department is nothing more than a point around which costs may be conveniently assembled for allocation to other departments. Thus maintenance, depreciation, insurance, and taxes applicable to buildings may be collected as "building cost," a cost to be distributed on an appropriate basis to all departments making use of this factor. It is also necessary to select specific units in terms of which costs can be expressed and measured. In a job cost system the individual order or job is of course the principal cost unit for all producing departments. In an operation or process cost system the essential unit of measurement is the cost of the particular operation or process. In many enterprises both job and operation costs are stressed and numerous other kinds of units, varying from department to department, are employed in assigning costs.

Applying Overhead to Departments and Jobs. The next step is the distribution of the various classes of overhead charges among the production and service departments established for cost purposes. In this connection numerous bases and methods are employed. Charges for heat, light, caretaking, etc. are often assigned, for some departments or cost centers, in terms of space or area occupied. Such costs as liability insurance, salaries of personnel staff and timekeepers, and welfare and medical charges may be distributed on the basis of the labor hours or labor costs—or, possibly, the number of workers—found in the respective departments. Costs of handling and insuring materials and supplies and of transporting materials within the plant may reasonably be assigned in proportion to the cost (or, in some cases, weight or other physical measure) of materials and supplies consumed by each department or center. The distribution of property taxes, fire insurance, depreciation, etc. should not disregard the asset values represented by the various departments. Other illustrative suggestions might readily be listed but it is necessary here merely to indicate the nature of the problem and the general character of the usual treatment. Assignment of charges to service departments is facilitated where it is recognized that although the entire cost of such departments is viewed as overhead from the standpoint of the manufacturing process as a whole some elements of such cost are direct charges from the standpoint of the particular service departments. It should be emphasized that the basis of dis-

tribution should vary with the kind of department as well as the type of cost factor involved, and that the entire scheme of cost assignment in a given enterprise should be in harmony with the particular conditions in effect.

After all overhead costs have been departmentalized the costs of service departments must be spread over the various production departments (in particular cases service department costs are assignable to other service departments "enroute" to assignment to production cost centers). This phase of allocation calls for bases and methods similar to those employed in the original departmental apportionment. The periodic amount of service charge applied to a producing department in a given case should be based on a continuing study of all the specific factors involved. In this connection it is important that capacity to serve as well as extent of service actually rendered in a particular period be given consideration.

Where the cost system in effect requires assignment to particular orders or jobs the final stage of allocation, assuming that all overhead costs have been compiled by production departments, is the application of these accumulated departmental costs to the cost sheets representing the specific orders. In this final assignment the overhead charges are commonly allocated in whole or in part in proportion to one or more elements of direct cost, in proportion to direct labor time, or in terms of hourly machine burden rates or cost-center burden rates which have been worked out more or less elaborately. As in other phases of cost assignment the conditions of each case should determine the method or methods employed.

Limitations of Cost Allocation. In many situations throughout the field of business—particularly where conditions of joint and complementary costs are prominent—it is difficult if not impossible to find reasonable and practicable bases of allocation, and as a result of this condition highly arbitrary methods of apportionment are often employed. In this connection a word as to the limitations of internal cost classification and assignment is necessary. The typical manufacturing enterprise (or other type of concern, for that matter) is an integrated institution, all elements of which are more or less inseparable and interdependent. And although for purposes of effective administration it is necessary to view the enterprise in terms of distinct activities, functions, and departments, it is also important that

the lines of technical and economic interconnection be not disregarded. Cost allocations, essential though they may be for the measurement of performance, are at the best somewhat artificial from the standpoint of underlying relationships. If the cost accountant demonstrates, for example, that a particular line of product is being sold at a loss it does not follow that this member of the business can be summarily lopped off, even if the condition disclosed appears to be persistent; in many cases the elimination of the apparently unprofitable activity would have seriously unfavorable effects upon other departments or on the business as a whole. It may be concluded, therefore, that highly questionable and arbitrary assignments of cost should be avoided. In general it is better to deal with common or joint costs in total, without allocation, than it is to distribute such charges artificially, thus obscuring departmental data which have considerable significance and suggesting conclusions of very doubtful validity.

Accounting for Overhead. As indicated earlier, the element of overhead cost is controlled either by a single account in the general ledger or by a group of departmental accounts. (If a separate self-balancing factory ledger is employed which is tied to the main books through the use of interlocking accounts the overhead controlling accounts will appear in such ledger.) The supporting accounts are maintained in the subsidiary overhead cost ledger. The charges to the controlling account or accounts representing costs incurred arise primarily from the voucher register or related forms. Where a special factory journal is used the charges covering supplies used, defective work, etc. come from this source. The periodic entries covering the assignment of overhead or burden to the departments or centers established for cost purposes (where such assignment is not fully reflected in the original recording) and the final application of overhead to production accounts or cost sheets are posted through the general columnar journal or, in some cases, through factory journal or separate journal voucher sheets. Under a job-order cost system the usual procedure is to charge the cost sheets as the jobs progress with burden at estimated rates, the amount being credited to a clearing account labeled "overhead applied" or "overhead absorbed," and at the end of each month the actual overhead cost as accumulated is closed against the clearing account. A special adjustment is then required for the amount of over- or under-absorbed burden. Under

a process cost system the charges to work in process or production accounts are based directly upon the overhead accounts as accumulated for the period.

Periodic Treatment of Overhead Illustrated. A hypothetical example will serve to outline the treatment of manufacturing overhead at the close of the period.

The M Co. produces two distinct products, A and B, and in each case there are two production cost departments or centers. There are two service departments, X and Y, rendering service to the manufacturing activity as a whole. All factory overhead costs are controlled—in the initial stage—by a single account in the general ledger, which is supported by a subsidiary cost ledger. The Company operates under a process cost system. For convenience it will be assumed that all costs as incurred through the period are booked in terms of kind, with no recognition of departmental distribution and assignment until the end of the month. (In an actual case partial assignment, for certain types of costs, would be accomplished during the month.) Likewise transfer of such costs as storage, depreciation, insurance, and general administration to overhead is effected monthly and adjustments for spoiled work are made only at the close of the period. On the other hand indirect materials are regularly charged to overhead on the basis of tabulations of requisitions, and indirect labor is similarly charged as payrolls are accrued. At the close of business on June 30, under these conditions, the overhead controlling account, before any adjusting entries have been recorded, shows a debit balance of $15,000. At this point the following data, based on underlying cost compilations and analyses, are available: (1) indirect labor cost in payroll accrued on June 30, $300; (2) indirect materials requisitioned, not previously charged, $200; (3) storage and handling costs applicable to production, $600; (4) accrued depreciation assignable to manufacturing, $1,000; (5) insurance costs chargeable to factory, $300; (6) administration costs assignable to production, $800; (7) amount of total overhead representing cost of service department X, $3,000; (8) amount originally assignable to service department Y, $2,000; (9) amount applicable directly to production of product A, cost center I, $3,500, and cost center II, $2,500; (10) overhead applicable directly to product B, cost center I, $3,200, and cost center II, $4,000; (11) cost of service department X transferable to department Y, $500; (12) balance of cost of department X assignable to A I, $300, A II, $600, B I, $700, and B II, $900; (13) cost of service department Y assignable to A I, $800, A II, $500, B I, $600, and B II, $600.

The general entries required to recognize these adjustments and cost analyses, in the order of the data given, are as follows:

(1)

Manufacturing Overhead.	$ 300	
Factory Payroll		$300
To book indirect labor accrued on June 30		

(2)

Manufacturing Overhead.	200	
Materials and Supplies.		200
To complete record of indirect materials requisitioned		

(3)

Manufacturing Overhead	600	
Storage and Handling Costs		600

To assign portion of storage costs to production

(4)

Manufacturing Overhead	1,000	
Allowance for Depreciation		1,000

To record portion of depreciation accrual for month applicable to manufacturing

(5)

Manufacturing Overhead	300	
Insurance		300

To apply portion of insurance premium expired to manufacturing

(6)

Manufacturing Overhead	800	
Administration Costs		800

To apply portion of administration costs to production

(7)

Service Department X	3,000	
Manufacturing Overhead		3,000

To segregate costs of department X

(8)

Service Department Y	2,000	
Manufacturing Overhead		2,000

To segregate costs of department Y

(9)

Production Account—A I	3,500	
Production Account—A II	2,500	
Manufacturing Overhead		6,000

To apply accumulated overhead to cost departments—product A

(10)

Production Account—B I	3,200	
Production Account—B II	4,000	
Manufacturing Overhead		7,200

To apply overhead to cost departments—product B

(11)

Service Department Y	500	
Service Department X		500

To assign portion of department X costs to department Y, to cover service rendered by X to Y

(12)

Production Account—A I	300	
Production Account—A II	600	
Production Account—B I	700	
Production Account—B II	900	
Service Department X		2,500

To distribute balance of department X costs among production departments

(13)

Production Account—A I	800	
Production Account—A II	500	
Production Account—B I	600	
Production Account—B II	600	
Service Department Y		2,500
To spread cost of department Y over production accounts		

Entries (1) to (6) evidently are for the purpose of completing the process of accumulating manufacturing overhead cost in one general account. In this connection it is assumed that storage and handling costs and administration charges have already been accumulated in special accounts, while in the case of depreciation and insurance the entries given are assumed to be elements of the original accruals. In entries (7) and (8) the costs representing the activities of the two service departments are segregated. Entries (9) and (10) cover the allocation of overhead costs which are applicable directly to production. The possibility that one service department may render service to another is illustrated by (11). Entries (12) and (13), finally, represent the distribution of adjusted service costs to production accounts. The schedule of entries given is confined to the controlling accounts involved.

After these entries are posted the general manufacturing overhead account stands as follows:

MANUFACTURING OVERHEAD

June				June			
1–30		√	15,000	30		J(7)	3,000
30		J(1)	300	30		J(8)	2,000
30		J(2)	200	30		J(9)	6,000
30		J(3)	600	30		J(10)	7,200
30		J(4)	1,000				
30		J(5)	300				
30		J(6)	800				
			18,200				18,200

The service department cost accounts are also in balance and the four production accounts show debits covering overhead costs as follows:

Production Account—A I	$ 4,600
Production Account—A II	3,600
Production Account—B I	4,500
Production Account—B II	5,500
	$18,200

These "production" accounts are essentially departmental summaries of work in process. As pointed out earlier, work in process may be controlled in the general ledger by one or several accounts, depending upon the circumstances. The production accounts, it must be remembered, include direct labor and materials as well as overhead costs.

In this example the entire amount of overhead which is accumulated for the month is treated as applicable to the manufacturing operations of the month. In an enterprise subject to marked seasonal

fluctuations there is some justification for special adjustments by which a portion of the overhead accumulated in slack months of the budget year is held in suspense and assigned to the operations of the periods of high activity. Further, in periods of business depression, where overhead costs run high in view of the volume of output, a case can be made for the treatment of excess overhead charges as a loss rather than as a cost of manufacturing. One of the outstanding problems of manufacturing operation is "idle capacity," whether due to general business movements or to internal maladjustment and inefficiency, and much of the attention of the cost accountant is directed to the segregation and analysis of the costs attributable to this condition.

Finished Goods and Cost of Sales. Under a system of cost accounting in which the specific job or order is the central unit the regular procedure is to charge finished goods as soon as the particular job is completed. The general form of entries used is as follows:

Finished Goods (also subsidiary account)	xxx	
Work in Process (also specific order)		xxx

This procedure involves the use of estimated burden rates, based on past experience and current budgets, in completing the cost sheets, coupled with adjustments at the end of the month when the overhead as determined has been accumulated and distributed. Under other types of cost accounting, where the emphasis is laid on operation, process, or class costs, the cost sheets or production accounts are usually closed into finished goods, to the extent of completed product, only at the close of the month, on the basis of the average unit costs.

The balances shown at the end of the period by the cost sheets or production accounts, controlled by one or more accounts in the general ledger, represent the inventory of work in process, subject to any special adjustments authorized on the basis of the physical inventory and study of current prices. The importance of the periodic inventory of work in process varies from business to business. In construction work and in manufacturing heavy equipment the work in process at the close of a typical month is likely to be a large pool of cost, representing a considerable fund of working capital. Among converters, on the other hand, and in general where the process of production is short, it is often feasible to complete the bulk of the work in process at the close of the period, thus restricting the periodic inventory largely to raw materials and finished goods.

Where goods are produced to order and shipment regularly takes place as soon as the work on a particular job is completed the finished goods account may be omitted and the costs in process charged directly to manufacturing cost of sales. Where finished goods are recognized as a distinct accounting element the cost of finished stock consigned to customers must be accumulated and regularly recorded by a charge to cost of sales and a credit to finished goods, thus:

Manufacturing Cost of Sales	xxx	
Finished Goods (also subsidiary accounts)		xxx

The necessary entries in the accounts proper may be recorded shipment by shipment or from day to day, or in terms of longer periods such as the week or month, depending upon the circumstances.

In concerns which store finished goods in considerable amount and in which shipments are made primarily from stock warehouse facilities must be provided adjacent to the shipping rooms and a scheme of stores control must be established. The routine of handling and storing finished goods is similar to that required for raw materials. Incoming goods must be systematically accounted for and stored, under an effective classification of subsidiary accounts, and all withdrawals for shipment should be controlled by a scheme of shipping orders and necessary subordinate records. Where finished goods are withdrawn for use within the plant, or for further processing or assembly, a system of requisitions should be employed as in the case of withdrawals of raw materials from stores.

Finished Goods and Cost of Sales Illustrated. To illustrate the general procedure more definitely assume that on June 30 the work-in-process accounts of the M Co., before recognition of costs of completed work, stand as follows:

	Product A	*Product B*
Direct Materials	$22,000	$16,000
Direct Labor	15,000	11,000
Manufacturing Overhead	8,200	10,000
	$45,200	$37,000

The cost analyses which has been prepared show that the total cost of product A completed during June is $43,000, and that the corresponding figure for product B is $36,000. The following general entries are necessary:

(1)

Finished Goods—A	$43,000	
Work in Process—A		$43,000

(2)

Finished Goods—B	36,000	
Work in Process—B		36,000

Assuming, further, that the cost of shipments made during June totals $44,000 for product A and $33,000 for B, the entries covering cost of sales, by main departments, are:

(1)

Manufacturing Cost of Sales—A	$44,000	
Finished Goods—A		$44,000

(2)

Manufacturing Cost of Sales—B	33,000	
Finished Goods—B		33,000

In this example the possible effect of inventories of work in process and finished goods on June 1 is ignored.

Use of Standard Costs. With the development of budgetary procedure (that is, systematic planning and scheduling) in business operation has come the use of systems of standard costs. A "standard" cost is a judgment as to what a particular element of cost should be (or may reasonably be expected to be) under a given or assumed set of operating conditions and volume of output. Under a thoroughgoing standard cost system the cost or production accounts are charged with the standard costs of labor, material, and overhead rather than with the actual costs accumulated, and the variations from standard, either favorable or unfavorable, are isolated in special accounts and are treated as income adjustments. The purpose of such procedure is to emphasize standards of performance all along the line and to focus attention on conditions deserving particular observation and study. In this connection a distinction is often drawn between "controllable" and "uncontrollable" variances. The significance of the variations disclosed, evidently, will depend primarily upon the validity of the standards adopted, and it is equally clear that the standards used in any given situation must undergo a continuous process of study and revision if they are to be genuinely helpful.

The principal point to be made here is that the introduction of standard costs into the books of account gives rise to the use of spe-

cial types of supplementary accounts and necessitates adjustments of a highly technical character. The general character of such accounts and the entries involved can be indicated by a simple example. Assume that during the month of January the direct labor cost of the L Co. at the standard wage rates determined for the month and for the standard number of productive hours represented by the operations of the month amounts to $50,000, and that the actual labor cost incurred during January totals $3,000 in excess of standard, the amount of $1,000 being due to the payment of wage rates in excess of standard rates and the balance representing the use of a greater number of working hours than called for by the standard. Under these conditions, and assuming the type of cost system in which standard costs are substituted for actual costs in the main production accounts, the amount of only $50,000 would be charged to work in process on account of direct labor and the difference of $3,000 would be set up in supplementary accounts, "direct labor wage variance" and "direct labor time variance," in the amounts of $1,000 and $2,000, respectively. These supplementary labor accounts would then be closed out as adjustments of operating results rather than as elements of cost of production.

The charges to work in process for materials would likewise be based upon standard costs and the price and quantity variations from standard would be segregated and disposed of by special adjustments as indicated. Similarly the difference between overhead costs for the months as accumulated and overhead at the standard rates would be determined (in terms of product completed if not at an earlier stage) and would be excluded from the flow of costs at the point of determination. It should be added that where standard overhead costs are predicated upon "normal" activity and output the variations of overhead accumulated from standard in abnormal months may with some justification be carried forward as adjustments of the operations of later months or of the year as a whole, a treatment similar to that often accorded to overhead in enterprises subject to more or less regular seasonal fluctuations.

Inventories in Manufacturing. Most of the discussion of inventory procedure and valuation in the preceding chapter applies to manufacturing enterprises as well as to trading concerns. For the manufacturer, even more than the trader, cost is in general the sound basis of valuation. Manufacturing inventories, in the case of the

going concern, are essentially a pool of deferred charges rather than a fund of immediate purchasing or debt-paying power. This is particularly true of work in process, where the cash value realizable without completion is often merely that of the junk or salvage level.

As has been explained, the cost of work in process and finished goods on hand, like the cost of delivered sales, is based upon the accumulations of charges for materials, labor, etc. prepared by the cost accountant, and hence the degree of reasonableness and validity attaching to the inventory figures varies directly with the soundness of the entire process of cost procedure and allocation.

Among the special problems associated with manufacturing inventories is the valuation of joint-cost products—products which are particularly prominent in such fields as meat packing and oil refining. The general rule that the common costs should be apportioned in terms of the relative market values of the various classes of goods is not unreasonable and can be readily applied in some situations. In the meat industry the pricing of certain types of inventories at current selling price less estimated storing and marketing costs is a common practice, and is not seriously objectionable in this field in view of the narrow margin involved and the highly salable character of the merchandise. Incidental by-products are often priced at net selling value.

Selling prices are sometimes employed in the valuation of finished goods as a starting point in the process of estimating costs. In certain pharmaceutical lines, for example, the great variety of products turned out, the extent to which materials are intermingled in processing, and the high percentage of indirect costs involved make it difficult to accumulate costs directly for each type of product represented in the inventory.

In the manufacturing field the rule of "cost or market, whichever is lower," acknowledged as a valuation basis by many concerns, is particularly unsatisfactory. By "market value" in the case of work in process and finished goods is presumably meant the cost of manufacturing the goods on hand in terms of the prices of materials, labor, and burden components prevailing as of the date of the inventory, and the process of estimating such costs with reasonable accuracy is difficult and time consuming. It need not be surprising, therefore, to find that the "conservative" rule is often employed in practice in a very crude fashion.

Inventory Turnover in Manufacturing. The computation of significant turnover ratios in manufacturing is not a simple matter, particularly in view of the fact that inventories of work in process and finished product include varying elements of labor and burden costs. To find the turnover of materials throughout the inventory it is necessary to isolate the factor of materials in cost of sales and in the average inventory and divide the former figure by the latter. Material turnover from the standpoint of stores accounting, on the other hand, may be readily computed by dividing the amount requisitioned or put in process for the period by the average balance of stores. The relation of total factory cost of sales to the average of the entire inventory is of some interest but does not represent a clear-cut turnover of the component elements of materials, labor, and burden cost.

Treatment of Distribution and Administration Costs. According to the traditional view the costs of operating a business enterprise, particularly in the manufacturing field, fall into three main divisions, production costs, selling or distribution charges, and costs of general administration. Under the traditional view, further, it has been generally assumed that periodic apportionment of charges by means of the methods of cost accounting is feasible and is warranted only in the case of production costs, rather narrowly conceived; it has been assumed, in other words, that distribution and administrative charges are expenses as incurred and that internal analysis and tracing of such charges are not required. In recent years, however, there has been a tendency for business men and accountants to modify these positions in important respects. In the first place it is coming to be recognized that a classification of costs which divides all charges into two main pools, production and distribution, into which the costs of general administration can be absorbed upon proper analysis, is often more significant than the three-fold grouping. In the second place the importance of the application of the devices of functional analysis, budgeting, and standard costs in the control of distribution and administration charges, as well as production costs, has come to be widely acknowledged. Further, an occasional indication is found in business practice of a realization of the fact that there is nothing inherently unreasonable in an accumulation of elements of distribution costs as a type of deferred charge or cost inventory to the extent

that the charges involved are clearly incurred on account of future sales rather than on account of current business.

If an analysis of selling charges and costs of general management and operation along the lines indicated is reflected in the accounts the adjustments required are similar to those outlined above in the discussion of manufacturing overhead. Where such costs are first charged to accounts classified primarily by types of expenditure the assignment of charges to particular departments and functions is accomplished by crediting the original accounts and charging the internal cost accounts affected. The apportionment of departmentalized administration between production and distribution accounts necessitates a second level of adjusting entries. Further, if elements of distribution cost are excluded from current expenses because of their applicability to future sales the use of special accounts to receive the deferred charges is advisable. As in the case of overhead production costs all adjustments representing internal allocation of distribution and administration charges are made on the basis of cost analyses and compilations and for the most part the entries are recorded in terms of monthly summaries.

The cost classifications employed in dealing with distribution and administration charges naturally vary with the type of enterprise. Primary divisions under distribution include advertising and promotion, obtaining orders, packing and delivery, and handling accounts and collections—each of which is subject to considerable subdivision. Selling costs are likewise often compiled by products, territories, types of customers, and methods of selling and making delivery. Costs of selling, like manufacturing costs, may be either direct or indirect with respect to application to a particular cost function or unit, a fact which should be fully utilized in the cost compilations. Administration costs, prior to absorption in whole or in part by the cost accounts representing production and distribution, are subject to internal classification primarily in terms of operating departments or functions and character of service rendered. Examples of broad activities around which such costs may be assembled are finance, personnel work, public relations, office management, and accounting.

Questions

1. Outline the accounting for factory materials and supplies. Open skeleton accounts and post the illustrative entries given in the example on pages 513–514.
2. Discuss the problem of pricing requisitions.

3. Illustrate the treatment of labor cost in manufacturing. How should payroll taxes be dealt with?

4. What is meant by "overhead" cost? What are the principal bases for drawing the distinction between "overhead" and "direct" charges?

5. What is meant by a "cost center" or department? What is the nature of a "service" department? Illustrate.

6. Discuss the problem of applying overhead cost. Why should arbitrary allocations be avoided?

7. Open all accounts named and post the entries given in the example on pages 523–525.

8. Discuss the periodic accounting for finished goods and cost of sales in manufacturing.

9. What is meant by a "standard" cost? What periodic adjustments are necessary where such costs are introduced into the accounts?

10. Discuss the valuation of manufacturing inventories. What general rule is significant in the treatment of joint costs? Why is the "cost or market" rule especially unsatisfactory as an inventory device in manufacturing?

11. Illustrate the computation of materials turnover.

12. Into what two pools of cost may all costs incurred be divided? Under what circumstances would it be proper to defer a selling cost?

XXVII

PLANT ASSETS

Kinds of Plant. The term "plant" is used here to designate all types of structures and equipment employed in business operation. The principal classes of structures are: (1) buildings housing operations—factories, stores, banks, etc.; (2) immovable containers—grain elevators, coal sheds, oil tanks, etc.; (3) structural facilities—wharves, dams, shafts, bridges, pavements, tunnels, etc. Equipment in the broad sense covers: (1) stationary machines and apparatus—presses, lathes, blowers, pumps, etc.; (2) movable machines and facilities—office calculators, agricultural implements, construction equipment, etc.; (3) carriers or "rolling stock"—motor trucks, railway cars, ships, etc.; (4) conductors or conveyors—oil lines, water mains, power lines, etc.; (5) furniture and furnishings—tables, desks, carpets, linen, etc.; (6) designing and reproducing facilities—patterns, molds, drawings, book plates, dies, lasts, etc.; (7) hand tools—shears, pliers, hammers, wrenches, chisels, etc.; (8) movable containers capable of repeated use—boxes, casks, bottles, bags, etc.; (9) animals—mules, horses, etc. used for dairying, racing, etc. This classification serves to suggest the wide range of plant assets found in business operation but is not exhaustive. Grading and ballast on a railway right-of-way, for example, represent an improvement rather than land and hence are a form of plant asset, although not very easily classified under any of the above headings. Such assets as rubber trees, orange groves, vineyards, etc. are usually considered to be subject to depreciation, and may therefore be conceived as a form of plant, somewhat akin to animals.

Cost of Plant. Plant cost includes all charges necessary to place the property acquired in a condition ready to function. Where a unit

of buildings or equipment is acquired by outright purchase the cost of the asset to be recognized is purchase price, less any discounts or allowances granted by the vendor, plus transportation and installation charges. For example, the M Co. buys a factory machine from the R Co. at a gross invoice cost of $1,000, subject to a discount of 5% if payment is made in ten days. Using the net-price procedure the initial transaction is recorded as follows:

Factory Equipment (or other appropriate title)	$950	
R Co.		$950

The liability incurred for freight is $60 and the cost of delivering from the railway to M Co.'s factory is $5. The entries to include these additional charges in the cost of equipment are:

Factory Equipment.	$65	
Railway Co.		$60
Trucking Co.		5

Assuming an installation cost in labor (furnished by the M Co.'s own employees) of $20, and in materials (taken from the Company's own stores) of $5, the required entries are:

Factory Equipment.	$25	
Payroll		$20
Materials and Supplies		5

The total cost of the asset under these conditions is evidently $1,040.

Where assets are acquired by construction or fabrication—a common situation in the railway and other utility fields—a more complex problem of cost accumulation is involved. The first step is the issuing of the necessary authorization or work order. As the work progresses the costs are accumulated in more or less detail in specialized construction records in terms of particular jobs, and prior to completion the total of costs incurred is displayed as an asset in the position statement under "construction in progress" or some similar caption. When a job is finished and the new unit is placed in operation the accumulated cost must be set up under the appropriate account or accounts. Total cost should include all applicable engineering and general supervision charges, and other "overhead" items, but there should be no recognition of estimated "contractor's profit" or similar hypothetical computations. Outlays incurred on account of claims for damages due to accidents or other conditions growing

out of building operations may be treated as cost unless the amount is unreasonable. Costs of clearing sites, as contemplated at time of purchase, are chargeable to land rather than plant. Depreciation of equipment used in hauling materials or in connection with other construction operations is a proper addition to cost. Construction accounts in process should be credited with all materials or equipment returned or recovered, with amounts realized through surrender of insurance policies applicable to construction activity, and similar adjustments. It is usually considered expedient to treat minor revenues incidental to construction as a credit to gross cost.

Where plant assets are acquired by donation or act of investment rather than purchase the estimated market value should be recognized in the accounts in lieu of cost.

Used property acquired, like new assets, should be recorded at actual cost to the party buying the property. The practice of charging plant account with cost to the predecessor, modified by an account showing accrued depreciation to date, is objectionable. The starting point for the buyer's account is the cost he incurs, on a cash or equivalent basis, not cost to an earlier owner. Moreover, there is no such thing as accrued depreciation from the standpoint of the buyer's records at the date of acquisition.

Occasionally plant assets are acquired under a form of purchase contract which provides what amounts to interest on unpaid balances in the total contract price. In such cases, if the amount of implicit interest is substantial, the preferred treatment is to exclude the calculated interest factor from the charge to the plant account.

Subdivision of Plant Cost. Plant costs represent an important section of the resources of many enterprises, and the associated charges for depreciation and maintenance are often a substantial element in the periodic cost of operation. It follows that the accounting for plant should be systematic and reasonably detailed. As a rule plant records should show the cost of each main class of plant, each important subgroup, and each major physical unit. Reclassification according to function or department is often desirable. In some cases, moreover, the analysis should be carried further than the individual building or machine, particularly where the component factors of the unit have varying service lives. For example, the tires of a new motor truck may have a life of one year although the truck will last for four. Similarly the lining of a blast furnace, the cutter

of a machine tool, the paint job on a building, etc. may be replaced several times during the life of the principal unit involved. In all such situations subdivision of cost in terms of important elements subject to separate renewal will facilitate sound accounting for maintenance and depreciation.

Where a "basket purchase" of assets occurs, as in the acquisition of an entire operating plant at a lump-sum price, the subdivision of the total cost for administrative and accounting purposes may be somewhat difficult. The most reasonable general procedure is the classification of total cost in proportion to the estimated values of the component items as shown by the inventory of property compiled in connection with the transaction. In classifying the cost of an aggregate of used property acquired care should be taken not to attach too large an amount to property that will be retired immediately or at an early date. In the case of units subject to immediate elimination the cost thereof should approximate net salvage value; for units that will be used for a time before retirement the amount assignable should be net salvage plus a reasonable estimate of the value of the use contemplated.

The detailed plant records are of course controlled by appropriate accounts in the general ledger.

Maintenance Cost. As ordinarily defined maintenance charges include: (1) the regularly recurring costs of cleaning, adjusting, aligning, sharpening, and other forms of servicing necessary to keep property in good operating condition; (2) costs of renewing structural parts of plant units; (3) costs of major overhauling operations. The first class of charges represents day-to-day maintenance service required in handling all kinds of machines and apparatus and also needed in some measure in the operation of buildings and other structures. This section of maintenance clearly is external to the plant accounts and in general is chargeable to current costs as incurred. The cost of minor parts used in regular repair work may be included under this head. The second class of charges, the renewal of structural parts, occurs more irregularly and may or may not be considered to affect the recorded cost of property. If plant is rigidly defined in terms of such units as the distinct truck, machine, or building the renewal of tires, gears, and roof represents repairs rather than adjustments of plant (although this need not preclude the adoption of some system of spreading the cost of repairs). If, on the

other hand, the cost of property is conceived in terms of structural elements subject to separate replacement this section of maintenance cost, like the cost of major units, should be passed through the asset accounts. In practice a compromise policy is usually adopted, although the trend is in the direction of a more careful accounting for part replacements. In major repair and overhauling operations adjustment of plant accounts is very likely to be justified, as replacement of important structural elements is usually involved.

To illustrate the ideal treatment of renewal maintenance assume that the M Co. erects a building at a total cost of $15,000, of which the amount of $500 represents the bill for exterior painting. The cost of painting is segregated in the subsidiary plant records and is depreciated at an annual rate of 25% of cost. Four years later the structure is completely repainted, the cost of the work being $600. The proper entries to record the paint renewal under these conditions are as follows:

(1)

Allowance for Depreciation	$500	
Building (and subsidiary account)		$500
To recognize elimination of cost of original paint job		

(2)

Building (and subsidiary account)	600	
Cash (or equivalent)		600
To record cost of new paint job		

(In practice it would be unlikely that the actual service life of the paint job would be precisely equal to the estimated life.) By this treatment the cost of the original painting is spread over the period of use and the cost of the second painting is set up as an asset, to be allocated to future years.

The original costs of component elements are not always readily determined, even where the plant record is carefully kept. A motor truck, for example, is purchased for a lump-sum figure, and the invoice may give no indication of the amount applicable to tires and other parts subject to separate renewal. It is usually feasible, however, to make satisfactory estimates based on the price lists for parts or other available data. In making such estimates care must be taken to make allowance for the fact that the retail values of separate repair parts are often considerably higher than the costs of such parts embodied in the price of an entire plant unit. The relatively high cost of separate parts means that maintenance renewals tend to raise the level of total plant cost and subsequent operating charges.

Even where all replacements of major parts are treated as plant adjustments, maintenance cost often fluctuates sharply from month to month, with little regard to the volume of business. In some situations, in fact, repairs are heavier during dull seasons, the slackening of business making it feasible to devote more attention to upkeep. This condition is sometimes dealt with in monthly statements by spreading the yearly maintenance in terms of budget estimates.

Additions and Improvements. An addition may be defined either as the acquisition of a new unit of plant or as an extension of an existing facility without serious reconstruction or alteration of such facility. Thus a new building is clearly an addition to property and a new wing or section likewise may be viewed as an addition. The term is particularly applicable to extensions of water mains, power lines, and similar types of property.

Additions made without disturbing the status of existing units of plant are accounted for in the same manner as original acquisitions, and present no special problems of classification and valuation. Where, however, the process of making the addition brings about a considerable change in plant units already in use care must be taken to avoid capitalizing removal costs and retaining values represented by elements eliminated or superseded.

Where an addition is intimately related to a main unit which is subject to retirement as a whole the service life of the addition is presumably limited to the remaining life of such unit.

An improvement may be defined technically as any alteration or structural change in a unit of plant property which results in greater durability or increased productivity or efficiency. The substitution of slate or copper roofing for wood shingles, the installation of heavier grates in a boiler, and the waterproofing of a wall are examples. The replacement of an entire unit with a more up-to-date and adequate type of asset is likewise often referred to as an improvement. Thus defined an improvement may or may not result in an increase in recorded plant cost. However, it is the essential function of the accounts to show costs in terms of dollars without regard to changes in efficiency and other technical conditions. If a particular unit or factor is replaced precisely in kind but at a higher cost the investment in plant has increased and the accounts should reflect this condition; if the cost of the replacing element is less than that of its predecessor the proper entries will result in a decrease in the cost

of plant. Similarly if a technical improvement is made the net effect upon the plant account is determined by a comparison of the cost incurred with the book value of the part or unit superseded, if any.

Where detailed records of original construction are available the cost of roofing, masonry, piping, etc. removed or superseded in connection with improvements to buildings can usually be determined from such records. In the absence of adequate construction data the current costs of similar work, adjusted to allow for changes in prices since erection or purchase, may afford an adequate basis for estimates. If book values are based upon appraisals supported by detailed "inventories" or cost compilations the amounts to be eliminated can be ascertained from such supporting data. Deductions arising in connection with improvements to purchased equipment are often estimated on the basis of detailed analyses of cost secured from the vendor. As in the case of additions, charges incurred in eliminating old work should be excluded from the debit to plant account.

Reconstruction and Rehabilitation. Major programs of rebuilding and alteration, like replacement of parts and specific improvements, should be dealt with in such manner that the resulting plant account fairly reflects the cost of the property in its revised form. Where the reconstruction of a major unit or section is very complete it is advisable to view the transaction substantially as a full replacement. Under this approach the book value of the old unit or units is closed out, an allowance is made for elements to be incorporated in the rebuilt structure, and the appropriate plant accounts are charged with the cost of the new work plus the allowance. Where the job is confined to extensive alterations, falling short of rebuilding, the emphasis is placed on the calculation of superseded parts and elements and the isolation of the costs subject to capitalization, and the recorded values are in large measure retained. Especial care must be taken in handling reconstruction jobs to avoid overstatement. Removal costs are often a substantial amount, and should not be confused with capital charges. If the costs incurred in construction are abnormally high due to the special operating conditions under which rebuilding must be undertaken, it may not be reasonable to charge the entire outlay to plant account. In rebuilding a street railway line, for example, it may be necessary to construct a stretch of temporary track in order to handle traffic while the work is being done, and no part

of the cost of such track, it is usually held, is assignable to the final result. The fair cost value of the converted property as a whole must not be lost sight of. The rebuilt unit or units of plant may not represent the ideal layout from an operating standpoint, although sufficiently satisfactory to justify the expenditure. Certainly the maximum value which can be attached to a revamped building or assembly of equipment is the cost new of similar assets particularly suited to the needs of the business.

Special costs of remodeling and rearranging should in some cases be given a service life much shorter than that of the main unit involved. In the case of a rented building, for example, alteration costs may be incurred in adapting the structure to the needs of successive tenants, and if all such charges are capitalized in terms of the expected life of the property as a whole the result will be an increasing overstatement of building cost. The proper treatment is to charge the cost of each set of alterations to a subsidiary building account which is subject to amortization during the lease of the tenant for whose benefit the charge was incurred.

The cost of restoring or improving buildings or equipment acquired in a run-down condition is sometimes referred to as "rehabilitation." In general such cost is subject to capitalization as a clear-cut element of plant investment in all cases in which the condition of the property was known at time of purchase (and hence was presumably reflected in the price paid) and the work of restoration is undertaken, as contemplated, soon after acquisition. Costs of removing and demolishing old structures under these circumstances should also be charged to asset accounts, with adjustment for salvage recovered. Care must be taken to distinguish genuine rehabilitation charges from ordinary maintenance costs which may be incurred at about the same time, and in dealing with large aggregates of property it is not always easy to draw the line. In some cases it may be necessary to approximate the amount of expenditures deserving capitalization by comparing the total of maintenance and restoration costs incurred with the estimated normal upkeep.

The concept of rehabilitation should not be extended to cover costs of overhauling and rebuilding made long after acquisition, and brought about by unforeseen conditions. Where, however, a property is purchased in a seriously depreciated and impaired condition expenditures for rehabilitation may be spread over a number of

years. In considering the effect of a particular restoration cost the question to be asked is: does this expenditure restore the property to a higher level of condition and value than obtained at the date of purchase? If an affirmative answer is justified the outlay is subject to capitalization, at least in part.

Replacements. A replacement in the usual sense occurs when one or more distinct plant units are acquired to take the place of one or more old units which are being completely retired from service. The new property may be of precisely the same type and capacity for service as that superseded, but more often it is not identical with the old either in physical character or productivity. This means that either an improvement or a curtailment of plant may be involved in a replacement. Even in the event of a replacement strictly in kind, moreover, the cost of the new unit is not likely to be the same as that of the old.

As in the case of other kinds of plant adjustments a proper accounting for replacements is facilitated if systematic and detailed records of plant cost have been maintained. It is essential, further, that in analyzing the data of a replacement the accountant recognize that two distinct and equally important steps or transactions are involved: (1) the elimination of the old unit; (2) the acquisition of the new. A replacement, in other words, is a combination of a retirement and an addition and should be accounted for accordingly. This point may be emphasized in terms of a simple example. The M Co. acquires a unit of equipment as of January 1, 1940, at a cost of $4,000, including all assignable transportation and installation charges. During the next ten years renewals of major parts and other adjustments result in increasing the total net cost of the unit to the amount of $4,300. On December 31, 1949, the applicable accrued depreciation totals $3,900. At this point the unit is replaced by new equipment of similar type at a total cost, installed, of $5,000. Cost of removing and dismantling totals $100; parts are recovered and placed in stores with an estimated value of $175; cash is received for junk, $50. The appropriate entries for the general ledger are:

(1)

Equipment—Allowance for Depreciation	$3,900	
Retirement Suspense	400	
Equipment—Cost		$4,300
To close cost and applicable depreciation of unit retired, the difference being charged to a temporary clearing account		

(2)

Retirement Suspense	100	
Cash (or equivalent)		100
To record cost of removing and dismantling		

(3)

Cash	50	
Materials and Supplies	175	
Retirement Suspense		225
To record cash received for junk and estimated value of parts recovered		

(4)

Retirement Loss	275	
Retirement Suspense		275
To close balance of suspense account to special loss account		

(5)

Equipment—Cost	5,000	
Cash (or equivalent)		5,000
To record net invoice cost of new equipment and other applicable charges		

The use of the special clearing account serves no purpose other than that of facilitating a step-by-step recording.

Treating a replacement as a single transaction by charging the cost of the new unit and other charges incurred to the allowance for accrued depreciation is seriously objectionable, even in the case of replacement in kind. Such treatment ignores the difference between the cost of the new unit and that of the property retired, often a substantial amount, with resulting misstatement of both cost and accrued depreciation. It also leads to careless handling of removal charges and salvage. The only sound procedure is that which recognizes the retirement involved as a distinct transaction, to be recorded without regard to the cost of the succeeding property. Under this procedure all plant costs incurred are passed through the asset accounts in a systematic manner, and the cost of the property in service or available can be readily determined at all times. On the clerical side, moreover, the separation of the two phases of a replacement is desirable. Removal of the old unit and installation of the new may not occur simultaneously. The new unit may be purchased and actually placed in service, or in readiness to serve, before the property marked for retirement is disconnected and thrown out of use, and the underlying vouchers and other papers originating in connection with the purchase are likely to be quite distinct from the authorization to retire and records of disposition.

In the case of continuous structures such as railway track, power

lines, water mains, etc., where replacement largely takes the form of piecemeal renewal and rebuilding, tracing the cost of plant in and out requires the development of special methods of analysis and procedure.

Exchanges of Plant. While barter in fixed assets is not a dominant practice in most market areas exchanges of plant property are not uncommon. In such transactions the cost of the assets acquired is measured by the fair market value of the assets given in exchange plus the amount of cash paid if any. A type of case along this line that is often improperly handled is that in which used equipment is "turned in" to the vendor in connection with the purchase of new equipment. In these exchanges the nominal price as shown by the agreement or invoice is often not dependable as an evidence of the true cost, on a cash or equivalent basis, of the property being acquired.

Assume, for example, that the M Co. trades to the Auto Co. a delivery truck which cost $2,000 and on which depreciation of $1,000 has been accrued to date of disposition, for a new truck with a list selling price of $2,500, paying $1,400 cash, "to boot." Assume, further, that the actual cash value of the old truck, as determined by an established market for secondhand units, is only $900. In this case it is the value of the old truck, $900, rather than its net book value, $1,000, or the apparent allowance by the dealer, $1,100, which is the sound basis to be employed in setting up the cost of the new truck. When the transaction is completed, accordingly, the proper entries boil down to the following:

(1)

Auto Co.	$ 900	
Retirement Loss	100	
Delivery Equipment—Allowance for Depreciation. . .	1,000	
Delivery Equipment—Cost		$2,000
To record elimination of old unit and delivery to dealer		

(2)

Delivery Equipment—Cost	2,300	
Auto Co..		900
Bank		1,400
To record acquisition of new unit and payment of balance due		

For income-tax purposes the Bureau of Internal Revenue has adopted the rule that neither income nor loss is recognizable upon the occasion of such exchanges, and that the tax-base "cost" of the

new property acquired is the sum of the depreciated book value of the retired asset plus the amount of cash paid or liability incurred. This fused-transaction procedure is highly objectionable in that it represents a definite violation of the principle that the accounts should show the actual cash or equivalent cost of existing assets, and permits retirement losses and gains to be submerged in the plant accounts for an indefinite period.

Retirements. The term "retirement" is sometimes restricted to the elimination of one or more units of plant from service, without accompanying replacement, although a broader usage is not inappropriate. An asset may be retired as a result of ordinary wear and tear which has progressed to a point which makes it unsafe or uneconomical to retain it longer in service Retirement may be premature because of accidents, obsolescence, and other special conditions. Whatever the cause or occasion for the retirement the accounting required should follow the same pattern. The cost or other book value of the property in question should be closed out, the depreciation allowance charged for the amount of applicable accrued depreciation, and removal cost and salvage value appropriately accounted for.

That a retirement may be recognized without the wrecking or junking of an asset, or other form of physical disposition, needs to be emphasized, as a common weakness in property accounting arises at this point. If a unit of property has ceased to function, and restoration to use is very unlikely even though possible, the unit is a bad asset and like a bad debt should be written off. It is not even necessary that it be moved or in any way disturbed physically. It often happens, when space is not at a premium, that structures and equipment are left standing for years, with no serious prospect of ever being used again, to avoid the trouble and expense of dismantling and removing, but this does not mean that they should remain in the plant account as "live" assets. The fact that no work order to remove or demolish has been issued does not justify—although it may explain—failure to record retirement. Periodic inventory or inspection should be a regular feature of plant procedure, and one result of such inspection should be the issue of instructions to eliminate from the accounts all elements of plant which have permanently ceased to function. Even if the property in question is fully depreciated, and hence has no net book value, it is not good

accounting to permit the cost and accrued depreciation applicable to remain on the books. Failure to retire results in an overstated plant cost, and may lead to errors in subsequent depreciation calculations.

This does not mean that assets temporarily out of use, or assets held as necessary stand-by or emergency facilities, should be written off.

Where an asset permanently out of use has a substantial net salvage value the retirement entries should recognize this value. One method consists of writing the plant down to the estimated recoverable amount, without change in classification. A better procedure is to charge a special account with the salvage value of property implicitly retired from both active and stand-by service. If there is a net recoverable value, it may be added, it is poor management to postpone actual disposition for any considerable time.

Treatment of Retirement Losses. The treatment of unusual retirement losses has been long debated, particularly in connection with utility regulation. It is generally agreed that minor book losses incidental to ordinary retirements should be absorbed currently as expenses or losses. Persistent support is found in some quarters, however, for the view that the undepreciated book values of plant units prematurely retired as a result of obsolescence and other special factors should be segregated as deferred charges, or should be capitalized as part of the cost of the superseding property. Notwithstanding its plausibility under some conditions this position is not sound. Reluctance to recognize losses on the part of those responsible for earning power is understandable, but does not afford a proper basis for accounting. It is unfortunate if expiring asset values have not been covered by accruals through the period of use, but the matter is not remedied by overstating expenses and understating the earnings of subsequent periods. The typical concern, moreover, is in no position to take action which will assure recovery of losses. The management is forced to face the competition of newcomers in the field who are able to use the latest methods without undergoing the losses incident to their development, and is doing nothing but confusing itself by loading unabsorbed plant costs, derived from facilities no longer in use, into its future operating charges. The possibility of loss through technical change is of course one of the factors which justifies the prospect of earnings, but if the particular producer fails to recover his investment in a particular generation of assets, together

with a profit, he obtains no special leverage on the future which will assure him of recouping either capital or lost profit.

In some of the utility classifications a special account is provided to which book losses arising from premature retirements may be charged under prescribed conditions, such losses then being spread over the expenses of succeeding years as directed by the regulating commission. This treatment has no justification from the standpoint of competitive price making but may have some merit in particular cases as a matter of regulatory expediency.

Restoration of Cost. More or less substantial additions are sometimes charged to maintenance, or omitted from plant account by some other procedure, either through error or deliberate policy, but this is not good accounting. Moreover, where such conditions come to light the supervising accountant or auditor should require the recognition of the suppressed asset costs by means of appropriate adjusting entries. Similarly if plant costs have been absorbed too rapidly, through depreciation accruals or otherwise, there should be a restoration of cost in appropriate amount as soon as the condition of over-absorption becomes evident. Restoration is justified whatever the cause of the premature write-down—sheer error, bad judgment, or careful treatment proved unsatisfactory by subsequent events. Important examples of the need for restoration of cost have arisen in recent years in the case of war facilities fully amortized under special income-tax rules which were found to have substantial value in postwar production.

It is sometimes argued that where property has been fully depreciated in good faith it is improper to adjust the depreciation allowance, and thus restore a portion of the cost, on the ground that no element of cost can be passed into expenses a second time. This argument has little force in view of the basic objective of accounting: *to furnish owners and other interested parties with significant economic data.* Sound administration of assets, useful departmental cost accounting, and correct reporting of net income require that all assets in use, and all resulting costs of operation, be recognized in any given year. In other words, the accountant should undertake to prepare the income statement and position statement for each year in such manner as to reflect as accurately as possible the prevailing facts, and should resist the policy of offsetting past mistakes by means of errors in the opposite direction in subsequent statements.

Valuation of Plant. Appraisals of plant assets are undertaken in connection with purchase and sale, financing, rate regulation, taxation, insurance adjustments, and other special circumstances. In the face of a marked change in the price level, moreover, there is always a desire on the part of business managements for revaluation of plant property, particularly for the purpose of effecting an adjustment of periodic depreciation charges.

For the going concern (where liquidation or salvage values are obviously not appropriate) the basis of valuation usually emphasized by the appraiser is cost of replacement, modified by an estimate of accrued depreciation. On the whole this line of emphasis appears to be justified; assuming that revision of recorded data is needed cost of replacement is generally the most useful substitute for historical cost. It should be recognized, however, that cost of replacement is most significant in the case of standard plant units which will presumably be replaced upon retirement substantially in kind. Where the property being valued is of an obsolete type, or where business or technical conditions are such that the property will not be replaced in any form, the application of cost of replacement may result in unreasonable conclusions—a point not always given sufficient attention by the professional appraiser. For such cases valuation should be based on a consideration of remaining usefulness and net salvage, if any.

There are two main procedures by which replacement costs may be introduced into the accounts and statements. Under one treatment the results of the appraisal are viewed as supplementary data and care is taken to record them in such manner as to avoid obscuring the cost figures. The gross amount of the adjustment from cost to replacement cost is shown in a distinct account, clearly labeled, and the adjustment of accrued depreciation made necessary by the shift in the basis of valuation is segregated under a special head. Similarly the effect of the asset revision on the proprietary equity is excluded from the ordinary capital and earnings accounts. Then as subsequent revenue charges are increased (or decreased) as a result of basing depreciation on replacement cost a corresponding portion of the equity adjustment is transferred to the income statement as absorbed appreciation (or declination). The effect of this is to base depreciation charges on replacement cost and at the same time to maintain the account with retained earnings on a strict cost basis.

The alternative procedure is essentially the application of the

concept of the "fresh start" or quasireorganization. Under this treatment the results of the valuation are accepted as the basic figures for subsequent accounting and the necessary adjustment of the proprietary equity is treated as a restatement of recorded capital. As under the first procedure depreciation charges are based on appraisal values, but there is no recognition of an offsetting adjustment in the income statement. The effect is to report net income and earnings accumulation from the date of the revaluation strictly on a revaluation basis.

Plant Control and Audit. Maintenance, replacement, and extension of plant should be controlled through periodic budgets. A sound program of activity in connection with plant requires coordinated planning by production, selling, and financial officers, with attention to long-run as well as immediate needs. In making decisions as to specific changes consideration should be given to condition and possible use of existing assets, interruption of production, competitive conditions, and other pertinent factors. As in the case of other budgets the program with respect to plant should be subject to prompt revision as changing circumstances warrant, although it is of course difficult in the case of extensive construction projects to make major adjustments overnight.

Where the enterprise using the assets does all or some of its own maintenance and construction work special forms and procedures must be developed to deal with these activities. Removal costs must be segregated; credits to asset accounts to cover elements removed or superseded should be carefully determined. Plans and specifications, details of work done, and reports of materials salvaged, are basic types of records in this connection. The booking of retirements should be based upon retirement orders issued by a responsible employee or official. Systematic inspection each accounting period is necessary to insure prompt recognition of all retirements, including those not currently represented by physical disposition.

The task of analyzing plant account, now a recognized part of the function of the public auditor, is especially difficult where cost is largely represented by lump-sum entries, with little or no supporting detail, which have arisen on the occasion of organization or reorganization. About all the auditor can do in such circumstances is to call attention to the situation and recommend a complete inventory and establishment of adequate classified plant records.

In the periodic audit of plant the data of additions and retirements should be reviewed, and tests made to check soundness of procedures followed. In analyzing additions special attention should be paid to discounts, transportation costs, and installation charges. With respect to retirements care should be taken to see that depreciation allowance has been properly adjusted and that salvage and removal costs have been appropriately determined and accounted for. Maintenance accounting should be reviewed, and adjustments made where charges have been improperly classified. Abandonments, fire losses, and other special situations should be investigated. Assets not in use but not retired should be segregated, and the net book value of such property should be adequately scaled down. Depreciation policy should be reviewed and if total depreciation accrued to date is clearly deficient or excessive a reasonable adjustment should be insisted upon.

Occasionally title to certain assets is not clear, and the auditor should be alert to this possibility.

Questions

1. Classify equipment assets under nine heads and give examples of each.

2. In recording plant cost how should the following be dealt with: transportation, costs of installation and tuning up, cost of clearing a building site, purchase discounts, implicit interest on a purchase contract, estimated contractor's profit in case of property constructed by owner?

3. A store building is purchased by M Co. from R at a cost of \$25,000. On R's books the cost of the building appears at \$35,000 and the total accrued depreciation stands at \$11,000. How should M Co. record this acquisition?

4. Where assets are acquired through the process of investment or without cost how should they be treated in the accounts?

5. What are the principal bases for classifying plant cost? Illustrate. How should the cost of a "basket purchase" be classified?

6. What are the three classes of maintenance cost? With illustrative entries discuss the accounting for each class.

7. How should plant additions be accounted for? Plant improvements?

8. What is the objection, from an accounting standpoint, to insistence on a definition of improvements in terms of physical condition and technical efficiency?

9. Outline the problem of accounting for a reconstruction job. How should alterations made to suit the needs of a particular tenant be dealt with?

10. Define "rehabilitation" and discuss the accounting for rehabilitation costs.

11. With an illustration show precisely how a replacement should be accounted for.

12. M Co. owns a typewriter with a net book value of \$45. It trades this machine, and \$75 cash, to R for a new typewriter with a list price of \$100. On the second-

hand market M Co. could have sold the old machine for $38 cash. Give entries on M Co. books.

13. Is physical removal necessary to retirement from an accounting standpoint? Explain.

14. "Unusual retirement losses may be capitalized as deferred charges to operations." Do you agree?

15. M Co. owns a plant which was constructed at a cost of $2,000,000 to manufacture war products and has been fully depreciated for income-tax purposes and in the accounts. M Co. plans to use this plant in peacetime operation and has been offered $1,000,000 in cash for the plant by a competitor. How should this matter be dealt with from an accounting standpoint? Discuss fully.

16. "If costs have been fully absorbed by depreciation charges in good faith and it is later found that the assets involved have a substantial value and usefulness the proper procedure is to permit understatement of depreciation in the future to offset the unintentioned overstatement in earlier years." Do you agree?

17. Under what circumstances are plant valuations undertaken? Outline the procedure which should be followed if the results of an appraisal are introduced into the accounts.

18. Outline a program of control and audit of plant assets.

XXVIII

DEPRECIATION POLICIES AND PROCEDURES

Depreciation—Definition and Causes. "Depreciation" has come to be used particularly to designate the expiration of the cost or value of buildings and equipment in the course of business operation. The term is not ordinarily applied to the exhaustion of wasting resources such as mineral deposits, timber, etc., or to decline in land values. Many accountants also prefer to avoid referring to the amortization of intangibles, development costs, and leaseholds and other prepayments as depreciation, although the broader usage has been generally adopted in connection with income-tax administration. Merchandise and materials are subject to deterioration and loss in value due to other causes during the period of holding, but it is generally agreed that this phenomenon should be viewed as an inventory problem rather than as depreciation.

The limited service life of particular units and elements of plant is due to two main classes of factors or conditions. Plant assets, in the first place, are subject to "wear and tear" from actual operation, extraordinary damage due to improper handling or casualty, and the deterioration that comes with the lapse of time. These are so-called "physical" or "internal" causes. The second class of limiting factors includes obsolescence induced by technical developments, loss of demand for product, governmental requirements, and all other non-physical conditions or circumstances which affect service life. These are the "functional" or "external" causes. As a basis for justifying systematic accrual of depreciation the physical causes are usually emphasized. Virtually all classes of plant assets undergo unfavorable physical changes with use and advancing age and such changes are in some measure observable and predictable. On the other hand there is little doubt that under modern business condi-

tions ordinary wear is less potent in most cases in bringing about the decision to retire than obsolescence and other external factors. Buildings and other structures are often eliminated long before deterioration has advanced to a serious point, and early retirement of specialized equipment as a result of changing technical and business conditions is likewise a commonplace.

Impairment of physical character results from friction, vibration, strain, chemical reaction, weathering, and other factors associated with the utilization of plant assets. Intensity of use, care in handling, and standard of maintenance have a bearing. For many kinds of equipment deterioration is greatly accelerated by careless operation and failure to make repairs. Physical damage also may result from various kinds of operating accidents, and from storms, floods, earthquakes, etc. The effect of minor accidents, more or less unavoidable in the handling of large numbers of plant assets, is closely allied to that of ordinary wear. Wherever financially practicable the risk of loss due to major casualties should be minimized or eliminated through the use of insurance.

"Obsolescence" in the narrow sense represents the effect upon plant assets in use of inventions and technical developments; the term is also used more broadly to embrace the influence of the entire range of changing business conditions. A distinction is sometimes drawn between the obsolescence resulting from the "normal" progress in the industry and that due to unusual and revolutionary changes in technique. By "inadequacy" is usually meant the impairment of the effective usefulness of particular plant assets as a result of changes in the character and volume of business, relocation, and other circumstances closely associated with the progress of the particular enterprises. "Supersession" is another term sometimes employed in this connection.

Cessation of demand for product naturally has a decided effect upon the economic significance of plant assets, especially those which cannot readily be adapted to new uses. Thus a specialized machine for making a particular kind of ammunition comes to the end of its service life if the market for the product collapses, even if the machine is in first-class condition and represents the very latest and most efficient device for the purpose. In some cases the fact that the use of particular units of plant is limited can be recognized at the outset. Machines may be installed, for example, to take care of a particular contract or job, such as the building of a ship with the

that retirement will occur when the project is completed. Other examples are found in the special equipment required in producing a particular type of style goods, for which the demand will presumably be of short duration, and assets such as book plates and picture films (in the typical case).

Estimating Service Life. The first step in preparing estimates of service life for a particular unit or group of like units is to consider the effect of ordinary operating conditions, without regard to the external factors. An important question in this connection is probable intensity of use. In general high speed and continuous operation result in a shorter service life for machines than low speed and intermittent use. In the case of ordinary buildings, on the other hand, continuous occupancy as compared with, say, ten-hour use may have a negligible influence on total service life. A related and even more important consideration is the anticipated standard of upkeep. It is a commonplace that careful handling and liberal maintenance tend to prolong service life materially. The highest possible standard of servicing and repairing, however, is presumably not the one which should be adopted. The proper level of maintenance activity is that which is most reasonable and economical in view of the cost of the property, the cost of upkeep, the cost of replacement, the physical conditions under which operations are conducted, and other pertinent data.

The second main step consists of an adjustment of the preliminary estimate to allow for the effect of obsolescence, falling off of business, and other possible causes of reduced life which are external to physical condition and operating standards, and which it is not feasible to take care of by insurance. Here there is little opportunity for precise calculations; reasonable estimating, in the light of past experience and scrutiny of current developments, is all that can be hoped for. In general the very uncertainty justifies a conservative position. A rough-and-ready method followed by some industrial concerns is to set effective service life at about half the term which might be expected if it were only necessary to consider physical character and internal operating conditions.

Even if no specific evidence of obsolescence of the particular unit in use is in sight the contingency should not be neglected in estimating service life. The object is to set a reasonable period in which to absorb the cost of a unit of plant, and where past experience in the

field shows that the majority of units have been retired long before the expiration of physical life it is folly to assume that existing property is immune to technical change and other special developments. This need not be interpreted as a recommendation that obsolescence which has in no way materialized should be "accrued." Depreciation accounting should be conceived not as a means of accruing the effect of this or that factor but as an apportionment of cost over the useful life which, under all the circumstances, may reasonably be anticipated.

Depreciation and Maintenance. The close relation between maintenance and depreciation deserves emphasis. Aside from such charges as insurance and taxes there are two main components in the total cost of operating a unit of plant, (1) the cost of acquiring the unit and (2) the cost of keeping it in operating condition. The cost of acquisition is incurred in a lump at the beginning of service life; maintenance charges are incurred throughout the period of use, more or less irregularly. Where maintenance costs fluctuate considerably between years, and particularly where such costs tend to increase as the property grows older, it has sometimes been suggested that the estimated total maintenance should be spread in a systematic manner, in combination with depreciation, throughout service life. The main objection to this suggestion is that it requires the use of an additional estimate in connection with a computation already made difficult by the uncertainty of service life.

As indicated in the preceding chapter if structural parts subject to separate renewal are viewed as depreciable units, with their own estimated service lives, a considerable part of the cost generally referred to as maintenance may be treated as depreciation and spread systematically over the years affected. Refinement in this direction—more careful definition of the unit—seems to be the most promising way of improving the allocation of total plant cost to revenue.

Recording Depreciation Cost. Estimated periodic depreciation, as previously explained, is generally recorded by crediting a contra account rather than by means of direct subtractions from plant cost. This practice serves to emphasize the fact that the periodic amount of depreciation is an estimate and to distinguish this element from credits representing retirements. The retention of undiminished cost figures in the main plant accounts is also a convenience in the application of straight-line depreciation rates, and encourages the

reporting of both cost and accrued depreciation in the financial statements. On the other hand there is no basic objection to crediting estimated depreciation directly to the main plant account. Indeed, such treatment is more clear-cut than the use of the contra account and would tend to discourage the confusion of thinking regarding the effects of depreciation accounting that is universal among laymen and by no means unknown among accountants.

The debit to record depreciation for the period may in the first instance be recorded in a main "depreciation cost" account. This account may then be broken down by departments or other groupings as required for cost accounting purposes. It is not ordinarily expedient to attempt to subdivide depreciation in terms of the factors affecting service life, such as wear and obsolescence. An important point to remember is that not all depreciation cost accrued in a period is necessarily chargeable to the revenue of the period. A portion of expired plant may be chargeable to inventories or—where assets are being used in the process of construction—to fixed-asset accounts.

Straight-Line Method. The straight-line method of spreading depreciation—which assumes that depreciation accrues uniformly in time—is in wide use in American practice, and has been taken for granted in illustrative computations of depreciation in preceding chapters. The periodic charge to operations under straight-line apportionment is found by dividing the depreciable amount by the number of periods represented in the service life. If a particular machine, for example, costs $1,800, is expected to have no net salvage value, and will probably remain in service for 120 months, the monthly depreciation charge is $1,800 divided by 120, or $15. As a rule the periodic accrual is expressed as an annual or monthly rate applied to cost. Thus in the example the annual rate is 180/1800 or 10%. If the depreciable amount is less than cost a rate may still be computed on cost, although in this case the estimated service life is not the reciprocal of such rate.

The underlying basis for the straight-line plan lies in the fact that depreciation occurs in time and that in many cases some at least of the factors that bring about physical decline are in effect continuously. The deterioration of cast-iron water mains, for example, is neither accelerated nor retarded in appreciable degree by variation in the amount of water piped, and progresses without regard to the

time of day or season of the year. On the other hand the cases are perhaps more numerous in which physical wear is influenced by extent of use and changes in operating conditions. The life of an electric motor, for example, is largely a question of the amount of running time. With respect to the effect of obsolescence and related factors there is no way of demonstrating the validity of the straight-line assumption but it is difficult to suggest a more acceptable alternative. Certainly the effect of technical improvement and other external influences on the service life of a machine in use can not be arrested by storing the machine, no matter how carefully it is protected from physical deterioration.

A major theoretic objection to the straight-line method is found in the tendency toward an increasing rate of return on remaining investment resulting from its use. A fishing launch, for example, costs $2,000, and the owner expects to keep it in service for five years from date of purchase. The estimated net sale value at retirement is $400, and the depreciation per year on the straight-line plan is accordingly $320. The estimated revenues and expenses (exclusive of depreciation) are $1,100 and $700, respectively, per annum. The effect in this assumed situation of the use of straight-line depreciation upon the rate of return is shown by the tabulation below. The result of the computation is a rate of return on the launch ranging from 4.35% the first year to 14.29% for the fifth year. Evidently this is not a reasonable picture of the history of this asset, viewed as a distinct venture or investment, as business assets in general manifest no ability to earn more per dollar of remaining investment with increasing age.

			Expenses				
Year	*Average Investment**	*Revenues*	*Depreciation*	*Other*	*Total*	*Net Income*	*Rate of Return*
1	$1,840	$1,100	$320	$700	$1,020	$80	4.35
2	1,520	1,100	320	700	1,020	80	5.26
3	1,200	1,100	320	700	1,020	80	6.67
4	880	1,100	320	700	1,020	80	9.09
5	560	1,100	320	700	1,020	80	14.29

* Average of net book values at beginning and end of year.

From a practical standpoint this criticism of uniform spreading of depreciation is minimized by the fact that the plant property of the typical industrial concern is represented by a considerable number of units, in various stages of service life, rather than by a single oper-

ating asset. The assumption of stable revenues and expenses, moreover, introduces a condition seldom if ever realized. For many assets net income tends to fall with increasing age due to declining revenues, increasing charges, or both. The scale of rentals for space in an old office building, for example, is usually on a lower level than that of a competing new building, and maintenance costs are likely to run higher in the old structure. And even where the rate charged for a unit of output remains unchanged the total of revenue is likely to be diminished by the increasing time required for servicing and repairing. A taxicab in its last year of operation, for example, is likely to be out of service for more hours than a new car.

Interest Method. The use of compound-interest computations in spreading depreciation derives support chiefly from the objection to the straight-line plan discussed above. The essential conception of a plant asset under the interest method is that of a bundle of services, to be realized through the expected life period, and the original cost and succeeding periodic balances are deemed to represent the values of the remaining services in each case, discounted by the application of an appropriate rate of interest. The periodic depreciation charge is then determined in a manner consistent with the underlying valuation process assumed.

For example, the M Co. builds a warehouse at a cost of $100,000. The estimated service life is twenty years and it is assumed that there will be no salvage value. It is decided to spread depreciation on a compound-interest basis. The rate of interest selected is 6%, the estimated average earning power of the business as a whole. Under these conditions the first year's charge—the amount of an annual deposit which at 6% would accumulate to $100,000 in twenty years—is $2,718.46, and the entries are:

Depreciation Cost	$2,718.46	
Allowance for Depreciation		$2,718.46

The second year the depreciation is the sum of the original charge and interest at 6% on the amount previously accrued, or $2,881.57. For the third year the depreciation is again the sum of the original charge and interest at 6% on the total accrued as shown by the balance in the allowance account at the beginning of the period. And so on. The partial tabulation below indicates definitely the method of calculation. For each period the interest factor to be included in

the total charge to operations is found by applying the rate of 6% to the total accrued depreciation. (The total accrual at the beginning of the twentieth year is $91,775.04.) The marked increase in the annual charge—from $2,718.46 the first year to $8,224.96 in the twentieth—need not be surprising in view of the length of time involved and the rate of interest employed.

	Annual Depreciation Charge			*Accrued*	*Net Book*
Year	*Annuity*	*Interest*	*Total*	*Depreciation*	*Value*
1	$ 2,718.46	$ –0–	$ 2,718.46	$ 2,718.46	$97,281.54
2	2,718.46	163.11	2,881.57	5,600.03	94,399.97
3	2,718.46	336.00	3,054.46	8,654.49	91,345.51
..	......	......	......	......	......
20	2,718.46	5,506.50	8,224.96	100,000.00	–0–
	$54,369.20	$45,630.80	$100,000.00		

This example brings out sharply the essential characteristics of any interest method of apportionment—a systematically increasing charge throughout service life. (The mistake has sometimes been made of assuming that under certain variations of the method the charge per period is a constant figure.) Here the charge the first year is $2,718.46 and in the twentieth year the amount is $8,224.96, an increase of over 200%. Such a scheduling of depreciation hardly seems reasonable from a practical standpoint, particularly where there is declining productivity with advancing age. The complexity of the method where there are many units of property, with varying lives, is a further objection to the wide adoption of this approach to depreciation apportionment.

Production Methods. Neither the straight-line nor interest methods of spreading depreciation take fluctuating activity or output into consideration, and this is perhaps their most serious weakness. There is undoubtedly much force in the proposition that plant assets should be written off in proportion to actual use and results accomplished rather than by periods of time as such. The cost of plant represents essentially a prepayment on account of expected services and is therefore chargeable to operations—ideally—as such services are received. From this standpoint, for example, a delivery truck should be depreciated in terms of miles driven, an airplane motor in terms of flying hours, and a steam shovel according to yards of material moved or some other appropriate gauge of service rendered. Similarly when factory equipment is being used by three shifts per day instead of

one it seems reasonable to hold that the depreciation recognized should be correspondingly increased.

On the other hand there are serious objections to the general use of degree of activity or volume of production as the sole basis on which to apportion plant cost. Deterioration of structures and many kinds of equipment is in some degree a matter of age rather than actual use. There is no evidence that the effect of obsolescence and related factors is retarded during slack periods. Failure to receive expected services in a particular period, moreover, is generally not accompanied by assurance of later increased use. These considerations, coupled with the clerical work involved and other difficulties of application, render the production approach less acceptable than it appears at first sight.

Estimating service life is not avoided by the adoption of any form of production method of apportioning depreciation, and the effect of obsolescence and related factors must not be ignored in making the estimate. If, for example, the life of a machine on a purely physical basis is ten years but its probable effective life in view of all impinging conditions is only five years, it is clear that the number of units of productivity or service to be expected is correspondingly restricted. The estimate of services to be received, in other words, should be in harmony with—if not actually based upon—the estimate of life. There are some cases, it is true, in which the fundamental estimate is the amount of service to be expected, with life being represented by the time taken to exhaust the available units of service.

The activity of plant assets may be measured in specific services rendered, working time, units of final output, or dollars of sales. The particular scheme adopted should be that most suited to the situation, and several variations may be reasonably employed by a single enterprise. For factory equipment number of operations and working hours are usually more appropriate bases than either the amount or value of product, especially in view of the difficulty of estimating production for a considerable period and of associating finished goods with particular units of plant. In mining, lumbering, and related lines, on the other hand, where it is possible to estimate total physical output, the depreciation of structures and equipment having a life as long or longer than the period required to exhaust the available mineral deposit or other natural resource can readily be computed in terms of units of product. The depreciation of special equipment acquired for use on a particular order or job

should be accrued as the work progresses. The "job method" is especially applicable in shipbuilding, road building, and other construction lines.

For a definite example assume that a motor is acquired at a total cost, installed, of \$3,000. Estimated net salvage is \$300. The active life of the motor is set at 3,600 running hours, and it is assumed that such life will cover a period of approximately two years. The depreciation cost per working hour under these conditions is 2,700/3,600, or 75 cents. During the first quarter following installation the recorded running time is 500 hours, and the depreciation charge for the period is therefore \$375. The entries are:

Depreciation Cost	\$375	
Allowance for Depreciation		\$375

Depreciation for later periods would be similarly calculated. Whether or not the expected running time is utilized within a life of two years is unimportant unless conditions arise which retard use to such an extent that it appears unlikely that the expected number of hours of service will be received before retirement is required on account of non-physical factors. In this event a revision of the schedule of depreciation would be necessary.

Production methods have a limited but important use as a means of securing reasonable spreading of annual charges, computed under the straight-line policy, over monthly or quarterly reports.

Decreasing-Charge Methods. The most widely known of procedures designed to provide a decreasing scale of depreciation charges during the life of an asset is the diminishing-balance method. Under this plan a rate is found that applied to net book value as of the beginning of each period will write the asset down to salvage value during estimated service life. Theoretically the method requires the assumption of a residual value, as it is of course impossible to reduce any amount to zero through the application of a constant percentage to successive diminishing balances. The formula for computing the required rate is as follows:

$$\text{rate} = 1 - \sqrt[n]{s/c}$$

In this formula n is the number of periods, s the net salvage value, and c the cost or other base figure. A machine for example, cost

$1,000, has an estimated salvage of $64, and is expected to last for three years. The required annual rate in this case is $1 - \sqrt[3]{64/1,000}$, which reduces to 6/10 or 60%. The following tabulation shows the computation of the depreciation:

Year	*Remaining Book Value*	*Depreciation Charge*	*Total Accrued*
1	$1,000	$600	$600
2	400	240	840
3	160	96	936
Salvage	64		

By another method the charge each year is determined by applying to the depreciable amount a fraction of which the denominator is the sum of the digits represented in an enumeration of the years of estimated service life and the numerator is the remaining life at the beginning of each period. Thus if estimated life is three years the denominator of the required fraction is 6 (1+2+3), and the charge for the first year is 3/6 of the total depreciable amount, the charge for the second year is 2/6, and the charge for the third year is 1/6.

While decreasing-charge procedures have not been widely used there has been some revival of interest in them in recent years as a possible approach to the liberalization of depreciation deductions for income-tax purposes. Aside from this aspect such methods are sometimes supported on the ground that a decreasing depreciation charge combined with an increasing maintenance cost will give a reasonable periodic total cost of operating plant. There is not much force in this point. Maintenance does tend to increase somewhat with the age of the property, but there is no evidence that such increase in any case tends to match the decline in the depreciation charge resulting from the use of arbitrary procedures such as those just outlined.

Measuring Depreciation by Examination. Among engineers the opinion seems to prevail that the condition of the asset as observed by a competent technician can be translated directly into value terms, and accountants are not impervious to this point of view. In general this position is not reasonable. To have value an asset must be capable of giving service, but it does not follow that the amount expiring from day to day throughout the useful life is precisely gauged by the extent of decline in physical effectiveness. As has often been pointed out, the change in the level of efficiency of a well-maintained unit of plant usually does not vary greatly from date of

acquisition to retirement. An airplane motor, for example, may perform nearly as efficiently on the last trip authorized as on the first flight, and a stretch of gas main will carry as large a load shortly before retirement as at any time in its history. In general it is poor management to attempt to use either structures or equipment which are so deteriorated or worn, or in need of servicing, that they cannot function in a manner in keeping with the normal standards of operation. This fact is recognized in some measure by the appraisers themselves in that they usually find that the plant of an enterprise as a whole has a condition percentage of 85 or better, and are unwilling to set a condition of less than 40 to 50% on units which are admitted to be on the verge of retirement. Incidentally, it is a commonplace that mechanical equipment is seldom at its best until well broken in, but no one argues that the increase in efficiency resulting from adjustment to operating conditions justifies a write-up of value.

The unreasonableness of converting condition percentages directly into value percentages is made more apparent when attention is given to the manner in which such data are compiled in the typical appraisal. In some cases the percentage represents the amount of work or service which the observer estimates may be expected from the unit in use for a particular period as compared with that which a new unit would presumably furnish; and on this basis a condition of 90% or even more may be found for an asset which clearly has most of its service life behind it. In other cases the percentage is found by making a modest deduction from "par" to reflect the fact that it would be possible to improve the condition of maintenance, all other considerations being neglected. In still other situations the appraiser's percentage may result from estimates and physical measurements, more or less carefully made, which seek to determine the precise extent of deterioration or wear at the critical points. This approach is somewhat more reasonable in that it at least throws light on the question of remaining life on a physical basis, but it is inadequate in that it ignores obsolescence and other non-physical factors. Significant calculations of wear and tear, moreover, are not easily made. Poles and ties may be probed to determine amount of decay, rails may be calipered to find the degree to which the wearing area has been consumed, boilers can be checked and examined for rust or other form of corrosion, but the sound interpretation of such field data is always a problem. And for many classes of structures or equipment no method of inspection is available which will fur-

nish dependable evidence of either expired or remaining physical life.

Depreciation Rates. Although a considerable amount of information has been gathered by valuation engineers, public accountants, special committees of trade associations, governmental bodies, and individual corporations bearing upon the service lives of various types of plant assets there are still no life tables available which can be used by the particular enterprise with confidence, and as long as the present tempo of industrial development is maintained the accumulation of wholly satisfactory data—as a basis for forecasting—can hardly be expected. Further, an average life derived from the history of many units, used by numerous concerns under a variety of conditions, is at the best a rather unreliable index of the future life of an individual plant asset in a particular setting. On the other hand, the data available are of such a nature as to make it unnecessary for any management to resort to mere guessing in establishing rates of depreciation on its plant property.

The tabulation following is intended to serve merely as a very general indication, for a few broad classes of property, of prevailing opinions as to the annual straight-line depreciation rates usually applicable.

Class of Property	*Rates* *Range**	*Typical*
Buildings and Structures—		
Frame	3⅓– 8⅓	4
Brick, Concrete, etc.	1⅓– 4	2
Equipment—		
Construction	10 –33⅓	20
Mining	5 –20	10
Oil and Gas	6⅔–33⅓	12½
Farm	5 –20	8⅓
Manufacturing	5 –20	6⅔
Power Generation	3⅓– 8⅓	5
Railway	3⅓– 6⅔	4
Aviation	20 –50	33⅓
Personal Service	5 –20	10
Motor Vehicles	16⅔–33⅓	25
Office	5 –16⅔	10
Tools	10 –50	33⅓

* Not including extreme cases.

Where assets are acquired in a used condition the appropriate rates naturally range above those applicable to new units. Additions and improvements that will be retired with the major units to which they relate should be depreciated accordingly. In mining, lumber-

ing, and other extractive industries the useful lives of structures and immovable equipment are limited by the period required to exhaust the mineral deposit or other natural resource. Similarly in other fields rates may be affected by the condition of related industries, franchises and other agreements, status of complementary assets, and other factors. Units of plant subject to continuous operation must generally carry higher rates than similar units operated intermittently.

Group Procedure. In accounting for a retirement the standard practice is to compute the total accrued depreciation to date of retirement on the unit retired, and determine retirement loss or gain by comparing this total with the cost or other gross book value eliminated after taking into account the effect of removal cost and salvage. However, in the case of groups of like units, of relatively small unit cost, a procedure is sometimes employed by which a group of assets—such as the poles installed in a particular month—is treated as a unit for purposes of depreciation accounting. Under this procedure the service life used is the estimated average life of all units in the group and retirement loss or gain is not recognized until the end of the life of the group; in the meantime the allowance for depreciation serves as a suspense account covering interim retirement loss and gain as well as accrued depreciation. Ideally this procedure involves the assumption that the underdepreciation with respect to units of less than average life will be offset by the overdepreciation on units that last longer than average life.

For example, at the beginning of a particular year the M Co. acquires 1,000 hammers at a cost of $5 each. Average life is estimated at two years, with no salvage value. The record of retirements is as follows:

End of first year	200 units
End of second year	600 units
End of third year	200 units

The entries to record depreciation and retirements under the group procedure are:

First Year

Depreciation Cost	$2,500	
Hammers—Allowance for Depreciation		$2,500
To accrue depreciation on 1,000 units, cost $5,000, @ 50%		
Hammers—Allowance for Depreciation	1,000	
Hammers—Cost		1,000
To record retirement of 200 units, cost $1,000		

Second Year

Depreciation Cost	2,000	
Hammers—Allowance for Depreciation		2,000
To accrue depreciation on 800 units, cost $4,000, @ 50%		
Hammers—Allowance for Depreciation	3,000	
Hammers—Cost		3,000
To record retirement of 600 units, cost $3,000		

Third Year

Depreciation Cost	500	
Hammers—Allowance for Depreciation		500
To accrue depreciation on 200 units, cost $1,000, @ 50%		
Hammers—Allowance for Depreciation	1,000	
Hammers—Cost		1,000
To record retirement of 200 units, cost $1,000		

In this artificial example the distribution of retirements is such that the estimate of average life is precisely validated and no retirement loss or gain emerges. In practice, needless to say, no such ideal condition can be expected.

Use of this procedure is not particularly objectionable provided it is carefully applied to definite installations or batches of like units. It is not acceptable, however, if applied to large aggregates of heterogeneous property, acquired at different times, as in such situations the use of this procedure might result in failure to recognize either deficient or excessive accrual of depreciation for a considerable period of years.

Removal Cost and Salvage. Implicit in the usual calculations of depreciation is the assumption that removal cost will just offset salvage—that there will be no net amount recovered. This assumption is not objectionable in many cases, particularly in view of the extent to which estimates are involved in depreciation calculations. However, in setting up service lives and depreciation rates attention should always be directed to the question of removal cost and salvage and these factors should be taken into account wherever there is good reason to expect that there will be a substantial excess of salvage over removal cost or vice versa. Where a substantial net sale or salvage value is anticipated the estimated amount thereof should be deducted from the cost of the property in determining the total subject to depreciation; where a removal cost substantially greater than salvage is anticipated the total to be accrued should include the estimated net cost to remove. The cost of elimination, like the cost of installation, is clearly a part of the total cost of operating the asset, and ideally this cost should be spread over the entire service life.

Including this cost in depreciation results in a proper allocation. The only objection to this procedure is the rather technical point that crediting allowance for depreciation with estimated removal cost includes in the contra account an element that is not, strictly speaking, an offset to plant cost. If desired the credit covering estimated net removal cost might be set up in a separate account—an account representing an offset to total current assets.

The practice of crediting proceeds from the disposal of plant assets to allowance for depreciation, and avoiding disclosure of retirement loss or gain, is not good accounting except possibly as this may be a feature of technical group procedure.

Revision of Depreciation Accruals. Depreciation procedures and computations should be critically reviewed periodically and should be modified wherever circumstances clearly indicate that this is advisable. If it appears that past depreciation accruals have been inadequate the total accrued to date should be increased by a charge to earnings (which should be clearly reported in the income statement) and rates should be adjusted to a proper level for the future. If it is convincingly determined that past accruals have been excessive a retroactive adjustment should be made by charging the allowance for depreciation (assuming the contra account is being used) and crediting earnings (again with full disclosure), and rates should be reduced appropriately for the future. As indicated in the preceding chapter, some accountants seem to be reluctant to make a correction that involves a restoration of cost, but this attitude is not justified. If plant assets are actually functioning the fact that their cost has been fully absorbed in earlier periods—through error or mistaken judgment—does not warrant understatement of current and future depreciation costs; neither is it sound accounting to report no net book value for such property in the position statement.

For income-tax purposes a prolonging or shortening of service life does not generally result in retroactive adjustment of depreciation accrued and taxes paid. Instead the usual procedure—assuming that the new estimate of service life is approved—is to spread the remaining depreciable amount over the longer or shorter period represented by remaining service life as reestimated.

Depreciation Base. Ignoring the question of removal cost and salvage the amount subject to depreciation is generally cost, or the fair market value at date of acquisition of assets acquired otherwise than

through the process of cost incurring. However, as pointed out in the preceding chapter, changes in prices may be so marked and persistent as to make the recorded data unsatisfactory as a basis for depreciation charges and justify a shift to replacement cost. With falling prices this is readily accomplished by appropriate write-down of plant. Where prices have advanced an adjustment upward of recorded plant values is necessary to a revision of future depreciation charges, and such adjustments involve unsettled questions of accounting policy and procedure.

There is undoubtedly a weakness in the accounting for income where depreciation cost is based on plant costs entirely out of line with current conditions. With labor and material costs on a current basis and depreciation cost based on prices of an earlier period the cost total is a mixture of unrelated elements and the resulting net income may be misleading—in so far at least as there is a tendency to view net income as a measure of purchasing power and disposable funds. There are, on the other hand, numerous difficulties in the way of achieving results that are worth while by attempting to shift the measure of depreciation to replacement cost. Revaluation is a troublesome process and the results are at best estimates; current costs of a particular date are not likely to measure actual cost of replacement at retirement; depreciation is only one cost and in many cases even a considerable modification of this element would not change the operating picture materially; replacement cost is not recognized as a basis of depreciation for income-tax purposes. In view of these and other considerations a sweeping adjustment of the depreciation base, especially an adjustment upward, should be undertaken only where the case for revision is convincing.

Retirement Policy. In the foregoing discussion of depreciation it has been assumed that a policy of accruing the estimated expiration of plant cost in a systematic manner is an established requirement of accounting, not subject to question. Actually the accrual policy has made headway rather slowly through the years and even now is not universally approved. There is an alternative approach to the problem, strongly supported by valuation engineers and many accountants in the utility field, which may be referred to as the "retirement policy." The advocates of this policy usually admit that depreciation is an unavoidable cost of operation and must be taken into account in some manner, but they insist that all accrual meth-

ods are highly "theoretical" and are almost sure to produce unreasonable results, especially when applied to railways and other types of utility property.

The retirement policy consists at bottom of the extension to the fixed assets of the usual methods of dealing with the current assets. It has two main interpretations. Under one procedure the costs of plant units less net salvage are charged to operation in full on the occasion of retirement. This is essentially the "one-hoss shay" theory of plant value; it assumes there is no depreciation until the finish line is reached. Under a second procedure the plant accounts are increased only in the case of improvements and extensions, and costs of all replacements in kind are charged directly to operation as made. The first of these is the better, in that it results in plant accounts that show the cost of the assets actually in use. With changing prices the other procedure fails even to meet this minimum requirement of property accounting. In utility accounting practice a combination of these procedures is often found, coupled with some use of accrual accounting for certain classes of property. The inventory method of dealing with small tools and other relatively short-lived assets, not uncommon in some industries, represents a minor application of the retirement policy.

There are obvious weaknesses in this approach. It recognizes no distinction in the accounts between old and new property; it provides no charges to revenue for plant cost, other than incidental maintenance, in the early years of the life of a property, before renewals of parts are called for; it encourages careless classification and failure to distinguish additions and replacements from current maintenance; for most situations it leads to an irregular and incomplete process of assigning costs to periodic revenues. In view of these weaknesses it is not surprising that accrual depreciation, notwithstanding the difficulties involved, is the approved policy in industrial accounting and income-tax determinations, is gaining ground in the utility field, and is almost universally supported by public accountants.

Significance of Depreciation Accounting. Most discussions of depreciation and depreciation accounting evidence confused thinking and misunderstanding at important points. The view persists that the depreciation charge is a hypothetical, somewhat arbitrary item, in sharp contrast to the ordinary "out-of-pocket" costs of operation.

There is also a very common tendency—from which even accountants are not exempt—to confuse depreciation accounting and the financing of replacements. The essential purpose of recognizing depreciation, many seem to think, is to accumulate funds to provide for the renewal of plant assets.

In view of this situation it needs to be emphasized, first, that depreciation does not differ, fundamentally, from any other class of operating charge. To carry on its activities a business enterprise requires the services of plant assets as well as current labor and materials, and the cost of plant is just as clearly assignable to revenues as are the costs of the other essential factors. And the statement that depreciation is not an out-of-pocket cost is questionable, to say the least. As a matter of fact depreciation represents the extreme example of prepayment. Expenditures for labor and materials are made on a day-to-day, month-to-month basis; the cost of plant is incurred *in advance* for years at a stretch. Let no one be misled on this point. The cost of plant is an actual cost and by the same token depreciation is a thoroughly valid operating charge. There is also little or no basis for the notion that depreciation is less likely to be recovered in revenues than other costs. In general each cost factor is on the same footing as far as normal price determination is concerned.

This does not deny that the *timing* of plant cost as a revenue charge is a peculiarly difficult problem. A unit of materials is commonly utilized as a whole in the operations of a particular period, and this fact affords a definite physical basis for the recognition of the charge. A unit of plant, on the other hand, renders a series of similar services over a period of several years, and is not actually consumed (except in the sense of deterioration and wear and tear) in the process. The length of service life, moreover, is uncertain. This means that the amount of the depreciation charge for the particular period is a matter of estimate—a condition which opens the doors of discussion and debate. It may be insisted, however, that the fact that problems are involved in spreading plant cost over operations in a satisfactory manner is no warrant for adopting the attitude that depreciation is radically different in its substance from other types of operating charges.

Second, the recognition of depreciation has no essential relation to the problem of replacement. The purpose of depreciation accounting is to assign the cost of plant (to the extent depreciable) to

operations, and hence to revenues, in an orderly, reasonable manner. This is just as necessary in the case of a mining shaft or sawmill which the management does not intend to replace as in the case of a stretch of telephone line which will presumably be renewed as required for an indefinite period. In other words, the necessity for charging operations with expiring cost factors, if periodic income is to be correctly reported, is not affected by the question of what will be done when the plant elements in current use are eliminated. The accruing of depreciation, moreover, does not in itself provide funds for replacement or for any other purpose. Complete recognition of all operating charges is necessary if net income or net loss is to be accurately reported, but the volume of funds flowing into the business is in general in no way affected by the process of accounting for expenses.

The almost universal practice of attaching the label "reserve" to the total amount accrued no doubt tends to encourage misunderstanding with respect to the significance of depreciation accounting. To many this term suggests accumulated earnings or even a fund of liquid resources available for replacement. Such interpretations are very wide of the mark. The balance of the allowance or "reserve" for depreciation is simply the measure of the amount of cost which it is assumed has expired as a result of operating use and the passage of time—the hole in the doughnut. Unless the estimate is excessive there is no vestige of income involved, and the accrued allowance neither directly represents a liquid fund nor indicates that such a fund has been accumulated. The allowance or reserve account, as explained in an earlier chapter, is essentially a vertical section of the plant account itself, established for the purpose of segregating a special class of credits to property.

Questions

1. Define depreciation, and outline the principal factors responsible for limited service life.

2. What is the objection to a combined accrual of maintenance and depreciation?

3. "If the depreciable unit is narrowly defined much of so-called maintenance cost becomes depreciation." Explain.

4. What are the advantages and disadvantages of the use of the contra account in recording expired plant cost?

5. "The depreciation accrued during the year should be charged to the revenues of the year." Is this always true? Explain.

6. With an illustration explain the straight-line method of spreading deprecia-

tion. What are the advantages of this method? Explain the theoretic objection to straight-line apportionment.

7. Illustrate and discuss the compound-interest method of spreading depreciation.

8. Illustrate the use of the production or service method of assigning depreciation to operations.

9. Explain and illustrate the "diminishing-balance" method.

10. Discuss the use of condition percentages, determined by inspection, as a basis of estimating depreciation.

11. What is the maximum depreciation rate appropriate for underground construction in a coal mine?

12. With an illustration explain the "group procedure" and indicate precisely where this treatment differs from "unit procedure."

13. "The cost of removing a unit of plant should be capitalized as part of the cost of the incoming unit." Do you agree?

14. Under what circumstances should depreciation accruals be revised?

15. Point out the weakness of depreciation accounting based on recorded cost where such cost is materially out of line with replacement cost. Argue, on the other hand, that a revision of the depreciation base should not be lightly undertaken.

16. Explain the "retirement policy" and indicate the advantages of the accrual approach.

17. Precisely what is the significance of depreciation accounting? Is it true that depreciation is not an "out-of-pocket" cost?

18. With respect to recovery in revenues is depreciation on a different basis than other costs?

19. "The recognition of depreciation has no essential relation to the problem of replacement." Discuss.

20. Is the use of a "reserve" account essential to the booking of depreciation? Explain fully.

XXIX

OTHER FIXED ASSETS

Investments. Stocks, bonds, notes, and other securities that lack ready marketability, or are not currently collectible, should be treated as non-current assets in the accounts and statements. Likewise securities that are held for some special purpose either permanently or for a period of years are non-current assets, without regard to their marketability. An important example is found in the holdings of stocks of affiliated companies.

Investments, like other assets, should be recorded initially at cost on a cash basis. Where the method of acquisition is an exchange or some other non-cash transaction care must be taken to translate the nominal cost into cash terms. Brokerage and other charges associated with acquisition should be included in cost. In the case of stocks held the cost should be credited with any amount received from the issuing corporation which represents return of capital, and should be charged with assessments or other additional payments made. Where the number of units held is altered by such transactions as split-ups, stock dividends, etc. the total cost must be equitably spread over the entire investment in its new form. Upon sale or other disposition the amount of gain or loss is determined as for other assets by comparing cost and cash or equivalent proceeds.

Bond or note investments acquired at a discount or premium are subject to accumulation or amortization. This matter is especially important to large holders such as insurance companies and other financial institutions. In general the proper procedure on the books of the holder of such securities conforms to that which is appropriate for the issuing company, although the use of special accounts to show the amount of the discount or premium is unnecessary on the

books of the investor. See discussion of corporate bonds in Chapter XXXVIII.

There has been considerable discussion among accountants of the question of what recognition if any should be given to the changing market values of securities held. With respect to marketable non-current investments the prevailing view is that continuous revision of values in the accounts is not required, although it is usually admitted that a parenthetic or supplementary showing of market value in the position statement is desirable, particularly where such value is materially above or below cost. (In the case of current investments there is more support for the display of market value although here too most accountants prefer to retain cost as the basic record.) Adherence to cost receives practical support from the fact that cost is the general basis of valuation for long-term investments prescribed for income-tax purposes. For non-current investments, moreover, it is agreed that fluctuations in market values do not give rise to realized gain or loss (and for current investments exceptions to this convention are considered proper only in case of dealers in securities and other special situations). The fact that market quotations may move sharply up and down, sometimes within the space of a few days, is another factor that discourages regular revaluation, for record and report purposes, of securities held.

Large amounts of marketable securities are held by investment trusts and such holdings may be viewed as either long or short-term investments, or both, depending upon the policies of the trust. The accounting procedure of such organizations, like those of insurance companies and other financial institutions, are governmentally prescribed at least in part. Under some circumstances the prescribed procedures require reporting of securities held on the basis of market values rather than cost.

The life insurance policies held by a business concern sometimes have investment aspects. The recognizable asset represented by such policies is usually restricted to cash surrender values. Cash funds accumulated and held over a period of years for special purposes, and that are unavailable for general use, represent a type of asset closely allied to investments. Other assets that may be included under a broad conception of investments are annuities, equities in partnerships, and long-term prepayments.

Land Cost. All business concerns occupy some space and hence require the use of land. Such use may be secured (1) through some

form of lease, easement, or related contract, or (2) through purchase and outright ownership. In the former case, if payment is made periodically for the use of the property, the cost factor takes the form of a recurring service or rent charge; where down payments covering a considerable period are made the result is a type of fixed asset, which should be described, however, as a leasehold (or in some qualified manner) rather than as actual land property. In the latter case the cost incurred is represented by a thoroughgoing fixed asset, usually deemed to be non-depreciable.

In setting up land cost on the books certain general principles or guiding rules should be observed. First, where an asset other than cash is the medium of acquisition the cash value of such asset represents the cost of the property acquired. Where mortgages and other liabilities are assumed in connection with the purchase of land the accrued amount of such liabilities may generally be viewed as representing cash cost. Second, care must be exercised to include all associated items of cost such as legal charges, cost of options, etc. Where land is held for resale, like merchandise, taxes and some other types of "carrying charges" are not infrequently included in the cost of property, a practice not to be followed in the case of land held for use in the business, with the possible exception of so-called "special assessment" taxes. Third, the cost of all buildings and structures, including costs of excavating and laying foundations, should be excluded from land costs. Cost of demolishing or removing buildings on land acquired with the intention of eliminating the existing structures is in general a proper element in the total cost of the land. Where land is acquired by the act of investment, or by gift or bequest, the fair market value at date of acquisition should be entered on the books in lieu of cost.

In most concerns land costs are not incurred from day to day and accordingly the land account is inactive, and not prominently represented in the regular accounting procedure. Land cost, however, often requires classification in the accounting system in considerable detail in terms of location, use, or other basis, and must be supported by underlying documents such as contracts and deeds, properly filed and safeguarded.

In the real estate field the spreading of total land cost over the salable units is an interesting problem. In general the most defensible method of apportionment is that which assigns the total cost in proportion to relative selling values as shown by the schedule

of prices fixed when the tract is placed upon the market. Land in this case, of course, is a semicurrent asset.

Land Cost—Illustrative Entries. An illustration in terms of skeleton journal entries may serve to make the foregoing comments more definite. The M Co. buys a parcel of real estate for $20,000, including the cost of an option, $100, previously paid. Upon completion of the purchase there is a cash payment of $9,900, and a 5-year, 6% mortgage is granted with a face amount of $10,000. It is also determined at this time that legal costs previously recognized on the books are applicable to this transaction in the amount of $50. The site acquired is occupied by an old building which it is intended to raze immediately so that the ground may be cleared for new construction. The entries required at the time of completion of the purchase may be summarized as follows:

Real Estate Purchased	$20,050	
Bank		$ 9,900
Option Account		100
Legal Costs		50
Five-Year Mortgage Payable		10,000

Shortly thereafter the old building is sold to a wrecking company for $500, cash, and is demolished and removed by the buyer. The entries are:

Land	$19,550	
Cash	500	
Real Estate Purchased		$20,050

Some time later a sewer assessment is levied upon the property amounting to $400. The land account should be charged accordingly:

Land	$ 400	
Sewer Assessments Payable		$ 400

In this example "Real Estate Purchased" is a clearing or suspense account, used during the period of acquisition and site preparation.

Amortization and Valuation of Land. Ordinarily land is not considered to be subject to amortization or depletion. The principal exception is agricultural land, which may suffer loss of fertility or exhaustion due to use or erosion. Where crops are rotated and

fertilizers regularly applied the process of exhaustion may be wholly or partially offset. Ideally all restoration costs should first be capitalized and then amortized systematically in terms of relation to periodic revenues, but such precise determinations may be impracticable in most cases. Division of total cost between amount applicable to residual land and the portion subject to depletion is an essential step in setting up a scheme of accounting for soil exhaustion.

The cost of leaseholds, temporary rights-of-way, and other terminable investments in land should be systematically amortized over the term or life of the property.

Any parcel of land is subject to change in value as a result of population increase or decrease, transportation developments, relocation of enterprise, and other causes. Such movements of value, however, seldom if ever occur in a regular manner over a period of years and hence revaluation is undertaken (if at all) only on special occasions, following a material and persistent declination or appreciation. If a decline or increase in value is recorded in the accounts the amount should be dealt with as a special adjustment of the recorded cost of the asset, and of the proprietary equity as shown on a cost basis. An estimated decline in land value is not a realized loss and appreciation of land is not realized income, and hence such changes should either be excluded entirely from the income statement or reported as supplementary data.

Some accountants take the position that the land account should remain at cost, without adjustment, regardless of what happens to the value of the property. This is too rigid a stand. Where value changes—convincingly evidenced—are so marked that recorded costs have become misleading there is ample justification for revision. From time to time management must make decisions as to property utilization, and current values are important as guides in this connection. Moreover, in computing earning rates the cost of property is not a significant basis where value is materially above or below cost. There is also the point that the market value of land, rather than cost, is the important measure in long-term borrowing. On the other hand, revision of the land account has no effect upon expenses and net income except in those special cases where land is subject to amortization.

Wasting Assets. Natural resources that are exhausted through operation and are not subject to replacement are often referred to as

"wasting assets." The principal examples are mineral deposits, including oil and gas resources. As a practical matter timber may likewise be viewed as a wasting asset in many cases.

Wasting assets acquired by purchase, like other property, should be recorded at cash cost. If the medium of payment is other than cash the estimated market value of such medium is the proper measure of cost. Where mining land is purchased outright a proper portion of the total cost must be assigned to residual land. Likewise if any improvements—mills, shafts, etc.—are taken over the cost thereof must be segregated. The balance of the cost of the property represents the amount invested in the wasting resource, and should be so recorded. In some cases the cost of the property must be spread over a number of mines, wells, or other operating units.

The cost of development incurred after the property is acquired often represents a large part of the final total. Development charges, like the cost of the original property, should be divided between depreciable improvements and resources subject to depletion, and should be appropriately assigned to particular centers of operating activity. Where a particular development project fails to disclose a resource that can be commercially exploited it is expedient to treat the charges incurred as a loss rather than as a cost of developments resulting favorably, although this treatment may be modified where the project can reasonably be construed as an adjunct of a larger program. Where the work of development is continued after commercial production begins the usual practice is to charge the cost of this work to revenues as incurred. This is obviously not ideal procedure and where the amount is large there is much to be said for a continuing assignment of development charges to property account, coupled with an adequate amortization of charges incurred in the past.

Carrying charges, akin to development costs, are especially important in lumbering. A stand of timber requires protection from fire hazard and disease and the costs of patrolling, removing underbrush, etc. are assignable to property account—during the process of cutting as well as earlier. The fact of timber growth, moreover, may justify a prolonged period of holding and a correspondingly large accumulation of carrying charges.

Depletion. In physical terms depletion represents the using up of the commercial content of a mineral deposit or other wasting re-

source; from a value standpoint depletion measures the expiration of the cost (or other recognized basis) of the resource resulting from the process of production. Depletion is like depreciation in that the term refers to the assignment to periodic charges of a long-term commitment, but otherwise the two phenomena are quite distinct. A wasting asset is essentially a store of raw material, the physical basis of the product of the enterprise, and this material is consumed as operation proceeds; a plant asset is employed in its entirety as a technical facility to furnish a series of services during its economic life and is physically consumed only to the extent of the wear and decay suffered. With cessation of operation, moreover, the process of extracting a wasting resource is definitely stopped, while the forces that bring about the retirement of plant tend to continue in effect even in the face of a complete and prolonged shutdown.

Since depletion is a cost of production it should be so reported in the income statement. The following indicates the ideal treatment:

Sales			xxx
Expenses and Taxes:			
Production Cost—			
Depletion	xxx		
Other (classified as desired)	xxx	xxx	
Selling and Delivery Expense		xxx	
General Administration Expense		xxx	
Taxes		xxx	xxx
Net Income			xxx

As a rule dividends can be legally paid by enterprises exploiting wasting assets to the extent of net profit computed without consideration of depletion. This fact is no doubt in part responsible for the common practice of excluding the charge for depletion from operating expenses. Such treatment is nevertheless without valid excuse. Experience shows that particular wasting resources do not last indefinitely, and to ignore the expiration of the cost of the resource in computing operating net is plain misstatement. The extent of the recoverable materials is often uncertain, but this is no warrant for entire omission of the charge. Most concerns in this field, it is true, recognize the necessity for a systematic scheme of property amortization, but seldom is the amount of the periodic charge definitely reported as a cost of production.

The total cost (or other valuation employed) divided by the estimated number of recoverable units represented by the available resource gives the unit depletion charge. The number of units pro-

duced during the period multiplied by the unit charge gives the amount of depletion to be assigned to current production. The charge applicable to revenue is found by multiplying the number of units sold during the period by the unit charge. The unit selected is usually that used in measuring either final or intermediate product rather than original material. Thus depletion is calculated in terms of pounds of copper, board feet of lumber, etc. Where a number of salable products originate from a single source it is convenient to compute periodic depletion in terms of the output of the primary material, and then to spread the total charge over the several products in proportion to respective market values or on some other reasonable basis. The cost subject to depletion, as indicated earlier, includes all assignable exploration and development charges.

Where production in connection with a specific mine or other operating entity begins on a commercial scale before development work is complete a possible procedure is to include the estimated cost to be incurred in the total cost to be written off in the computation of the unit depletion charge. An alternative procedure, which avoids the introduction of estimated future costs into the calculation, consists of the division of the total recoverable content of the resource into a number of blocks to which development charges as incurred are applied successively until the work on each may be assumed to be complete, coupled with a separate calculation of depletion for each block. Still another possibility is the recalculation of the unit depletion charge for the entire resource each period as long as major development work continues. This method is justified particularly where circumstances indicate that the output of later years should bear an increasing burden of development work, and where conditions make it necessary to modify the estimate of recoverable content from period to period.

The conventional output method of computing depletion ignores the factor of interest and hence tends to give periodic results which are not in harmony with the process by which the value of a wasting resource is primarily determined. That is, the cost of a coal deposit, oil pool, or similar asset may be conceived as the present worth of the series of recoveries anticipated during the period of exploitation, and from this standpoint the amount to be amortized each year is the difference between the present worth at the beginning of the year and that at the end of the period. The adoption of such an approach, however, would in general render a difficult problem more

complex, without any marked improvement in the reasonableness of the results in the typical case.

The difficulty of making reliable estimates of recoverable content in some fields has led to the limited use of a fixed percentage of dollar revenue to measure the amount of periodic depletion.

Depletion Entries Illustrated. For a simple example assume that the total cost of acquiring and developing a mining property is $1,000,000, and that of this sum the amount of $600,000 is assignable to the wasting resource. Assume, further, that the recoverable commercial content of the ore deposit that has been made ready for extraction is 6,000,000 units. The unit depletion charge is then 10 cents. During the first year of commercial operation the output, measured in marketable unit content, is 500,000. The number of units sold is 450,000, and the balance of 50,000 units is embodied in the inventories of work in process and finished product on hand at the end of the period. Appropriate general entries with respect to depletion under these conditions are as follows:

(1)

Depletion Cost of Production	$50,000	
Ore Deposit		$50,000
To record depletion cost of extracting 500,000 units		

(2)

Depletion Cost of Sales.	45,000	
Depletion Cost of Production		45,000
To apply proper depletion charge to sales, 450,000 units		

By this procedure the balance of depletion cost applicable to inventories is maintained intact in the ledger instead of being absorbed with other costs in inventory accounts. A variety of procedures are possible in this connection. In any event the total amount of depletion applicable to production should be divided between inventories and cost of sales, and whatever arrangement of entries is followed in the ledger it is advisable to segregate depletion cost in the income statement.

A contra account, "reserve (or allowance) for depletion," is usually credited with the periodic depletion. This permits retention of the cost of the depletible asset in the main asset account and serves to emphasize the fact that depletion is an estimate, more or less dependable. However, the making of direct deductions from asset cost is an acceptable treatment and has the advantage of being less likely to be misunderstood.

Valuation of Wasting Assets. Like other property, wasting resources must be valued in connection with purchase and sale, financing, taxation, etc. A special condition which may justify appraisal of such assets as mines and oil wells is the increase in the known reserves resulting from exploration and development. In the case of timber stands, similarly, the accretion due to natural growth affects recoverable content and values, and may require recognition. The appraisal of new discoveries of commercial extent is given encouragement by the fact that under certain circumstances fair market value "at the date of discovery or within thirty days thereafter" is an approved basis for calculating the depletion deductible for income-tax purposes.

The fundamental estimate in the valuation of wasting resources is that of the commercial content or stock of coal, oil, timber, etc. present in the property—the number of units commercially recoverable in view of the location and character of the material, existing methods of extraction, shipping facilities, and all other pertinent factors. Having found the total probable output the next step is to calculate the margin of income per unit. This evidently involves estimating both selling prices and costs of extraction and marketing. An important consideration here is the length of time which will be required to exhaust the property; where a considerable period is involved it may not be reasonable to assume that the current price of the product will persist throughout. It is also necessary to take into account the effect upon operating expenses of increasing depth or other changing conditions of extraction. With the margin per unit determined the final steps consist of the calculation of the annual operating net, before depletion, and the present value, at an appropriate rate, of the anticipated series of returns. As a rule it is not feasible to go beyond an estimate of average output, cost, and net, but occasionally greater refinement may have some significance (in a situation, for example where increasing cost and decreasing output can be confidently predicted). The rate of return employed in the computation should vary with the general risks attaching to the industry and the special uncertainties associated with the particular venture.

Where substantial increases in depletible property arise through discovery, development, or growth recognition of the increase in the accounts is clearly called for. In general the procedure should be to charge the appropriate asset account with the fair market value of

the increase, credit the accounts showing costs incurred—if any—in connection with discovery or other process, and treat the balance as a special adjustment of the proprietary equity. For example, if the growth of a timber stand in a particular year adds merchantable content with a fair market value of $100,000, and the incidental costs applicable total $1,000, the following entries are in order:

Timber—Accretion	$100,000	
Various Cost Accounts		$ 1,000
Equity Adjustment—Accretion		99,000

When the additional growth is cut depletion should be charged as in the case of purchased property. The equity adjustment account is closed to income, as "realized" gain, in periodic amounts corresponding to the accretion included in depletion charged to revenue.

Accounting for Capital Return. Distributions to the stockholders of a wasting enterprise from capital funds are sometimes referred to as having been "paid out of depletion reserve." Such a statement is seriously misleading. A proper accounting for depletion attempts to assign the cost of the wasting resource to production and revenues in a systematic and reasonable manner; and the recognition of costs neither requires a specific accumulation of funds nor insures a stream of revenues adequate to cover all costs. The "reserve for depletion," accordingly, is nothing more nor less than the credit to property account to cover depletion, and is in no way affected by dividend appropriations or payments, whether based on current net income, accumulated earnings, or capital investment. As noted earlier, the use of a special contra account is quite unnecessary to the orderly booking of depletion.

Where money becomes available in excess of net income, and the management decides to make a capital distribution rather than to incur further development costs, buy additional property, or accumulate a fund, the amount of the distribution is chargeable to capital account—capital stock in the case of a corporation. If, however, it is desired to avoid a direct charge to capital stock except where there has been either a formal reduction pro rata or a retirement of particular shares, a special offsetting account may be employed to show the amount of the distribution. Assume, for example, that in the first year of operation the net profit of the May Mining Co., after all charges, is $1,000,000, and that the funds made available by revenues and not needed to maintain working capital or for any other internal

purpose amount to $1,500,000 at the end of the year. The management now decides to pay a cash dividend of $1,500,000. The general entries required to cover the appropriation are as follows:

Income	$1,000,000	
Capital Returned to Stockholders.	500,000	
Dividends Payable		$1,500,000

The account showing capital returned is a contra to capital stock and should be shown as such in the position statement.

Can a dividend be paid out of capital in the presence of retained earnings? An answer in the negative is justified, although the affirmative position seems to find some support in practice. By definition and traditional interpretation the capital element of the stock equity is maintained intact in the face of losses until the element of accumulated earnings is exhausted, and it is both convenient and sound administratively to adopt a similar attitude with respect to dividend appropriations. Granting that it may be legally possible for the board of directors to reduce formal capital by pro rata distributions without first absorbing earnings, it may still be insisted that such action is likely to be misleading and is not good business policy.

Organization Costs. The general costs of launching a business concern include compensation of promoters, incorporation fees, commissions to underwriters, and other organizing and financing charges. Such costs are distinctive in that they attach to the enterprise as a whole rather than to particular tangible factors, and this fact no doubt explains in large measure the willingness of accountants to question their validity as an element in the total of asset values. Under one conventional treatment costs of this character are set up as a "deferred charge," a dubious item, and are irregularly amortized against revenues in from two to five years. A still more "conservative" treatment sometimes recommended consists of absorption at the outset as a deduction from the total proceeds of the securities issued.

Granting that organization costs do not represent independent realizable values they nevertheless deserve to be accounted for on their merits, like other expenditures. And if such costs measure legitimate prices of services which are necessary in getting the business under way, together with unavoidable legal charges, they stand on substantially the same footing as do the costs of construction. In other words, a reasonable commission paid in connection with

financing is just as properly a part of the total investment of the owners as is the fee paid to the architect who designs the plant. As to separate realizability, moreover, it should be remembered that highly specialized plant assets often have a negligible salvage value, and that the costs of such property, included without question in the original statement of assets, are essentially long-term "deferred charges."

Accepting the view that legitimate preliminary costs should be capitalized as a part of the asset total the question remains as to the ultimate disposition of such charges. The most reasonable position is that which simmers down to the following general rule: organization costs should be retained as a permanent asset as long as the business maintains a substantially unimpaired status as a going concern, as reflected in earning power and tangible resources, and should be amortized with a sustained contraction of income and tangible assets resulting either from lack of operating success or deliberate liquidation. Thus in the case of a continuing vigorous enterprise the costs of organizing the business are not subject to amortization. In a wasting enterprise, on the other hand, the general costs should be absorbed systematically through the life of the physical property.

It should be added that commissions and other financing costs associated with bonds and other terminable securities should be written off during the term of the security.

In the position statement organization costs should always be segregated, and where the amount is large a supporting note or schedule is desirable. As in the case of other factors the proper amount to be reported is the actual cost incurred in cash or equivalent. Where these rules are followed the presentation of such charges under assets is not only not objectionable but is definitely informative, in that it completes the account of the commitments made with the funds supplied by the investors.

Intangible Assets. The factors which may give rise to the so-called intangible assets include: (1) the favorable attitudes of customers, employees, and other influential groups with which the enterprise is in contact; (2) monopolistic privileges conferred by governmental authority—franchises, trade-marks, patents, etc.; (3) the peculiar knowledge and abilities of owners and managers, and special techniques and processes, privately controlled; (4) advantageous business and political circumstances and developments. These groups are

more or less interdependent, particularly in that one factor may give rise to another. Thus the "goodwill" of patrons may be founded in large part upon patent rights or other monopolistic conditions enjoyed. In a given situation it may also be very difficult to distinguish the effect of any one influence upon the total of intangible value.

In general the existence of intangible value is effectively demonstrated only in the presence of superior earning power. In other words, it is only where the estimated stream of net income which may be expected is more than sufficient to clothe the total of all tangible resources employed, including organization costs, with a fair or normal rate of return that an intangible value emerges. The amount of intangibles in a given case accordingly represents the excess (if any) of the fair value of the enterprise in its entirety, as a going concern, over the total amount of all the tangible components as determined individually.

The accepted rule with respect to intangibles holds that such values should be recognized in the accounts only to the extent to which they are validated by costs incurred, as a result of actual transactions. In the case of goodwill, moreover, it is generally considered to be good practice to set up as an asset only the amount explicitly paid for the intangible value in connection with the purchase of a going concern. That is, the capitalization of the costs of advertising campaigns and other sustained activities which may contribute to the development of goodwill is usually not deemed to be practicable. In the case of such assets as patents, on the other hand, all assignable costs of experimentation may be included in the recognized cost of the asset.

In the process of estimating the amount which can reasonably be paid for goodwill and other intangibles in the purchase of a going concern the principal steps are:

1. Study of past earnings as a preliminary to making an estimate of future income.
2. Preparation of estimates of the average annual income which may be expected.
3. Appraisal of tangible assets.
4. Ascertaining the fair or normal rate of return on capital in the particular industry.
5. Computing the average annual amount of differential or excess earnings.
6. Valuation of differential income.

In view of the risk involved the estimated differential earning power should not as a rule be assumed to be available for a period of more

than five years, and in calculating the present worth of such differential it is wise to employ a fairly high rate of capitalization.

The position is sometimes taken that the cost of purchased goodwill need not be amortized as long as the anticipated level of earning power is maintained. This position is hardly justified as a universal rule. If the amount paid for the goodwill is determined as indicated above by the capitalization of estimated superior earnings for a period of a few years, it follows that the cost of the intangible should be written off systematically as the period considered in the valuation elapses. On the other hand, if the intangible value is being fully maintained as a result of additional expenditures for advertising, development, and so on, all of which are currently charged to revenues, retention of the cost originally incurred, without amortization, may be entirely reasonable.

The cost of such assets as patents, copyrights, franchises, etc. should in general be amortized during the life-term of the grant—as a maximum period.

Questions

1. Give several examples of non-current investments. What treatment should be accorded brokerage costs incurred in acquiring securities?

2. Does an advance in the market price of securities held represent realized income? Should changing market values be reflected in the accounts?

3. List the principal items which should be included in land cost. What is meant by "carrying charges" in this connection?

4. Should changing land values be reflected in the accounts? Discuss.

5. Under what circumstances is land cost subject to depletion or amortization?

6. Define "wasting assets." Discuss the treatment of development costs.

7. Define "depletion" and show how this cost, ideally, should be reported.

8. With an illustration explain the computation of periodic depletion. How should development costs be dealt with in this connection?

9. Outline the process of estimating the value of a mining property.

10. Should accretion of timber be recognized in the accounts? If so, how?

11. With illustrative entries show how distributions from capital to stockholders should be accounted for in a wasting enterprise. Can "dividends" be appropriated from capital in the presence of retained earnings?

12. Discuss the original and later treatment of organization costs.

13. What conditions give rise to intangible assets? What is the essential test of the presence of intangible value?

14. Under what circumstances should intangible assets be recognized in the accounts? Discuss the amortization of intangibles.

15. Outline the process of estimating the market value of intangibles in a given case.

XXX

MANUFACTURING WORK SHEET AND STATEMENTS

Work Sheet—Outline of Adjustments. To illustrate, the conditions of an assumed manufacturing concern are utilized. The trial balance of the Elton Rubber Co., at the close of business on January 31, 1950, but before the manufacturing cost compilations have been entered in the general books, stands as shown in the completed work sheet on pages 592–593. A consecutive series of numbers is used for convenience in discussion to designate the titles given in the trial balance and the additional titles employed in setting up the adjustments—a series which does not represent either ledger pages or a scheme of account numbers. Another series is employed to designate the adjusting entries. The main feature of the type of work sheet used here, as compared to the form discussed in Chapter XX, is the use of the additional columns in which to assemble the data of manufacturing cost.

Following is an outline of the adjustments:

(1) (2) There are no cash adjustments.

(3) It is estimated that outstanding discounts on customers' accounts will be taken to the amount of $50. (Adjusting entries #1.)

(4) The trial-balance figure represents inventory on January 1 plus purchases received for the period. As materials and supplies have been issued during the month requisitions have been prepared showing the amounts issued and the accounts to be charged. These are now summarized for entry in the general books. The cost of raw materials which have gone into the manufacturing process is found to be $4,350. This amount is set up as item #40 on the work sheet, instead of being charged to the line showing work in process, so that the amount may appear as a distinct element in the manufacturing cost columns. The additional accounts and amounts to be charged as shown by the requisitions are: #26, $50; #27, $100; #28, $200. (Adjusting entries #2.)

(5) Requisitions for the month show that office supplies have been used to the extent of $50. The entire amount is chargeable to account #30. (Adjusting entries #3.)

(6) Shipping supplies requisitioned for the month total $200. The amount is chargeable to account #36. (Adjusting entries #4.)

(7) The trial-balance figure is the inventory of work in process at the beginning of January. In the type of work sheet here illustrated this item is carried directly into the adjusted trial balance and thence into the debit manufacturing cost column. The inventory of work in process on January 31, ascertained after all cost computations are completed, is $2,900. This amount is entered directly in the credit manufacturing cost column and in the debit position-statement column. With this procedure no adjusting entries are required and both beginning and ending inventories are displayed in the manufacturing cost columns. Under an alternative procedure adjusting entries might be set up crediting work in process with the amount of $200 and charging a special line labeled "adjustment of factory cost" with the same amount. Both inventory figures would then be omitted from the manufacturing cost columns and in lieu thereof the special adjustment of $200 would appear in the debit column.

(8) The trial-balance figure for this account represents the inventory at the beginning of the month. When the computations of the cost of goods finished and cost of goods shipped have been completed the new inventory is ascertained and in this case is found to be $4,110. Under the procedure followed here the amount of beginning inventory is shown, without adjustment, in the adjusted trial balance and in the debit income-statement column, and the concluding inventory figure is listed in the credit income-statement column and in the debit position-statement column. The difference between these two figures, a credit of $110, deducted from the balance of the manufacturing cost columns, gives the factory cost of sales. Again an alternative procedure would be to make adjusting entries debiting finished goods with the amount of $110 and crediting "adjustment of factory cost" (see discussion of (7) above). The inventory figures would then be omitted from the income-statement columns and the final balance of the manufacturing cost columns would become factory cost of sales rather than factory cost of goods completed. See later discussion of use of manufacturing cost columns.

(9) Expired insurance amounts to $300. This amount is chargeable as follows:

Ref. #	%	*Amount*
28	75	$225
30	10	30
32	5	15
37	10	30
	100	$300

(Adjusting entries #5.)

(10) No adjustment of accounts payable is required.

(11) Accrued payrolls to the close of business on January 31, not yet booked in the general records, amount to $300, chargeable as follows:

Ref. #	Amount
24	$100
25	25
29	25
31	100
33	50
	$300

(Adjusting entries #6.)

(12) Entries for salesmen's commissions are regularly made in connection with the entries covering the sales affected, and there is therefore no adjustment of this account.

(13) This account represents a single note on which interest has accrued for one month at the rate of 6%. The adjustment illustrates a case where neither of the accounts required appears in the trial balance. (Adjusting entries #7.)

(14) This account represents the unamortized cost of the Company's leasehold of land. The amortization for January is $100, and is chargeable as follows:

Ref. #	%	Amount
28	60	$ 60
30	20	20
37	20	20
		$100

The use of an offsetting account is not considered necessary here, and hence the amortization is credited directly to the leasehold account. (Adjusting entries #8.)

(15–19) The monthly rates of depreciation, and the amounts for January, are as follows:

Ref. #	Rate	Amount
15	1%	$250
16	2%	600
17	1%	20
18	2%	100
		$970

There have been no additions or retirements during the month and the rates given may therefore be applied to the figures appearing in the trial balance. The distribution of the depreciation charge is as follows:

	#27	#30	#37	Total
Building	$150	$50	$ 50	$250
Factory Equipment	600	....	....	600
Office Equipment	....	20	....	20
Selling and Shipping Equipment	....	....	100	100
	$750	$70	$150	$970

The single allowance for depreciation appearing in the trial balance should be viewed as a combination of four contra accounts modifying the four accounts with assets subject to depreciation. (Adjusting entries #9.)

(20) (21) The outstanding capital stock consists of 800 shares with a par value of $100 each. No adjustments are required, but the amount of retained earnings is of course affected by the final income balance (in this case a loss).

(22–27) There are no adjustments except as indicated elsewhere.

(28) This account, like accounts #30, #32, and #37, is used in lieu of several accounts that would be found in any actual case. There are no adjustments except as indicated elsewhere.

(29) (30) (31) (32) Of the balances of these accounts the amounts of $300, $100, $200, $100, respectively, are deemed to be assignable to account #28. (Adjusting entries #10.)

(33) (34) There are no adjustments except as indicated elsewhere.

(35) Advertising and promotion costs of $250 are deemed to be applicable to later periods. (Adjusting entries #11.)

(36) (37) There are no adjustments other than those indicated elsewhere.

(38) Property taxes are considered to be prepaid in the amount of $600. Some types of taxes are often distributed to various cost accounts, but in this case the amount of taxes applied to the month's business is handled as a separate item. No adjustment for income taxes is necessary in this case because the business operated at a loss during January. (Adjusting entries #12.)

(39) This account, a contra to the face amount of outstanding receivables, results from the entries (#1) which place the item of sales discount on an accrued basis.

(40) As indicated earlier this line is used to permit a segregation of the cost of materials chargeable to work in process. The amount so isolated is carried to the adjusted trial balance and thence to the manufacturing cost columns. It should be understood that a ledger account of this character is not necessary.

(41) (42) See comments under (13) above.

(43) (44) The use of these titles illustrates the practice of establishing special accounts at the close of the period to receive asset balances derived from accounts which are viewed primarily as expense accounts. It would of course be possible to retain these balances under accounts #35 and #38 and to show the charges applicable to current revenues under new titles.

(45) (46) The production records show that product with a cost of $300, including overhead, has been spoiled in manufacturing. This amount of spoilage is found to be in line with normal conditions of operation and hence may properly be considered a part of the total cost of turning out good product. However, in order to isolate spoilage cost for the attention of the management, a special account, "spoiled work cost," is charged and work in process—through line #46— is credited. The element of direct labor and materials in the figure of $300 can be obtained from the cost sheets, while the overhead costs applicable must be estimated. Since both debit and credit are carried to the manufacturing cost columns there is no net effect upon the balance of these columns. (Adjusting entries #13.)

(47) On this line is shown the balance of the manufacturing cost columns, the amount of the charge to the income-statement columns for factory cost of work finished during January. The figure is supported by subsidiary cost records. It is here assumed, however, that the actual factory overhead for the month is chargeable to the month's production and that no use is made of estimated burden rates. This means that the underlying records of the cost of goods finished and cost of goods

ELTON RUBBER COMPANY

Work Sheet—Month Ended January 31, 1950

Ref.	Titles	Trial Balance		Adjusting Entries		Adjusted Trial Balance		Manufacturing Costs		Income Statement		Position Statement	
		Dr.	Cr.	Dr.	Cr.	Dr.	Cr.	Dr.	Cr.	Dr.	Cr.	Dr.	Cr.
1	Cash	$ 300	$	$	$	$ 300		$	$	$	$	$ 300	$
2	First National Bank	6,000				6,000						6,000	
3	Accounts Receivable	14,000				14,000						14,000	
4	Factory Materials and Supplies	9,200			(2) 4,700	4,500						4,500	
5	Office Supplies	500			(3) 50	450						450	
6	Shipping Supplies	850			(4) 200	650						650	
7	Work in Process	3,100				3,100		3,100	2,900			2,900	
8	Finished Goods	4,000				4,000				4,000	4,110	4,110	
9	Insurance Prepaid	800			(5) 300	500						500	
10	Accounts Payable		13,000				13,000						13,000
11	Payrolls				(6) 300		300						300
12	Commissions Payable		600				600						600
13	Notes Payable		5,000				5,000						5,000
14	Leasehold	12,000			(8) 100	11,900						11,900	
15	Buildings—Cost	25,000				25,000						25,000	
16	Factory Equipment—Cost	30,000				30,000						30,000	
17	Office Equipment—Cost	2,000				2,000						2,000	
18	Selling and Shipping Equipment—Cost	5,000				5,000						5,000	
19	Allowances for Depreciation		5,000		(9) 970		5,970						5,970
20	Capital Stock Outstanding		80,000				80,000						80,000
21	Retained Earnings		3,500				3,500						3,500
22	Sales		21,000				21,000				21,000		
23	Sales Discounts	500		(1) 50		550				550			
24	Direct Labor	4,500		(6) 100		4,600		4,600					
25	Factory Supervision	1,200		(6) 25		1,225		1,225					
26	Heat, Light, Power	550		(2) 50		600		600					

27	Factory Depreciation and Maintenance	300		(2) 100 (9) 750		1,150		1,150					
28	Other Manufacturing Overhead Costs	700		(2) 200 (5) 225 (8) 60 (10) 700		1,885		1,885					
29	Office Wages and Salaries	1,000		(6) 25	(10) 300	725				725			
30	Other Office Operating Costs	500		(3) 50 (5) 30 (8) 20 (9) 70	(10) 100	570				570			
31	Administration Salaries	900		(6) 100	(10) 200	800				800			
32	Other Administration Costs	600		(5) 15	(10) 100	515				515			
33	Salesmen's Salaries and Commissions	1,600		(6) 50		1,650				1,650			
34	Salesmen's Expense Accounts	800				800				800			
35	Advertising and Promotion	700			(11) 250	450				450			
36	Packing and Shipping Costs	500		(4) 200		700				700			
37	Other Distribution Costs	200		(5) 30 (8) 20 (9) 150		400				400			
38	Taxes	800			(12) 600	200				200			
39	Accounts Receivable—Allowance for Discounts				(1) 50		50						50
40	Raw Materials Used in Production			(2) 4,350		4,350		4,350					
41	Interest Charges			(7) 25		25				25			
42	Interest Accrued Payable				(7) 25		25						25
43	Advertising Charges Deferred			(11) 250		250						250	
44	Prepaid Taxes			(12) 600		600						600	
45	Spoiled Work Cost			(13) 300		300		300					
46	Spoiled Work Cr. to Work in Process				(13) 300		300		300				
47	Factory Cost of Goods Completed								14,010	14,010			
48	Net Loss for Month										285	285	
		$128,100	$128,100	$8,545	$8,545	$129,745	$129,745	$17,210	$17,210	$25,395	$25,395	$108,445	$108,445

shipped are not completed until all adjustments have been made. See discussion of entries in the following section.

(48) The amount of the net loss is shown as a balancing credit in the income-statement columns and a balancing debit in the position-statement columns.

Significance of Manufacturing Cost Columns. These additional columns are used for bringing together all of the elements of manufacturing cost in terms of work in process, and their balance, as indicated above, is the factory cost of work completed. They therefore represent in effect a transcript of the account (or accounts) with work in process as it might properly appear on the books of a manufacturing concern employing the degree of cost procedure here assumed. For the purpose of a fuller explanation it may be well to show the summarized entries relating to work in process in this case in journal form. These are:

(1)		
Work in Process	$ 4,350	
Factory Materials and Supplies		$ 4,350
To record use of materials in factory operations		
(2)		
Work in Process	4,600	
Direct Labor		4,600
To record use of direct labor in factory operations		
(3)		
Work in Process	4,860	
Factory Supervision		1,225
Heat, Light, and Power		600
Factory Depreciation and Maintenance		1,150
Other Manufacturing Overhead Costs		1,885
To record consumption of other cost items in the manufacturing process		
(4)		
Spoiled Work Cost	300	
Work in Process		300
To recognize the cost of units of product spoiled in the course of manufacture		
(5)		
Work in Process	300	
Spoiled Work Cost		300
To charge work in process with the cost of units spoiled in the course of production		
(6)		
Finished Goods	14,010	
Work in Process		14,010
To record the factory cost of goods completed during the period		

Entries (1), reflecting the requisitioning of direct materials, represent a part of adjusting entries #2 as appearing in the work sheet. Entries (2) are represented on the work sheet by the process of carrying the adjusted item of direct labor to the debit manufacturing cost column. The closing of the adjusted overhead costs to work in process—entries (3)—is similarly handled on the work sheet by listing the proper items under manufacturing cost. Entries (4) are reflected on the work sheet by adjusting entries #13. Entries (5) reverse entries (4), which makes the procedure appear somewhat futile. However, the setting up of spoiled work under a special title, as pointed out earlier, may be useful as a means of bringing the matter sharply to the attention of the management. This type of adjustment may also reflect a significant rearrangement of data on the cost sheets, the underlying cost records. In this case, incidentally, no salvage value is assumed for spoiled work. Entries (6) are shown on the work sheet in the form of the balancing figure of the manufacturing cost columns. As stated, the figure of $14,010 is supported by the data of the completed cost sheets. The book inventory of work in process now stands at $2,900 (opening balance of $3,100, plus total charges for labor, materials, and overhead of $13,810, a total of $16,910, less the cost of work completed, $14,010).

In addition the following entries are required to record the factory cost of goods shipped to customers during the period:

Factory Cost of Goods Sold	$13,900	
Finished Goods		$13,900
To record the factory cost of goods sold during the period		

These entries, too, are supported by the underlying cost records. The book inventory of finished goods now stands at $4,110 (opening balance of $4,000, plus cost of completed work, $14,010, a total of $18,010, less factory cost of sales, $13,900). As has been explained, such book inventories must be tested from time to time by physical inventories and, if found inaccurate, must be adjusted. Assuming, however, that the cost records have been carefully compiled the book inventories are satisfactory for the purpose of monthly statements.

Income Statement Based on Work Sheet. The income statement of the Elton Rubber Co., drawn from the completed work sheet, is shown on page 596. In this statement the factory cost of sales is

ELTON RUBBER COMPANY

Income Statement

Month of January, 1950

Sales		$21,000	
Less Discounts Applicable		550	$20,450
Expenses and Taxes:			
Factory Cost of Sales (Schedule I)		$13,900	
Distribution Costs—			
Salesmen's Salaries and Commissions	$1,650		
Salesmen's Expense Accounts	800		
Advertising and Promotion	450		
Packing and Shipping Costs	700		
Other Distribution Costs	400	4,000	
Administration Costs*—			
Office Wages and Salaries	$ 725		
Other Office Operating Costs	570		
Administration Salaries	800		
Other Administration Costs	515	2,610	
Taxes		200	20,710
Net Loss			$ 260
Interest Charges			25
Loss to Stockholders			$ 285
Retained Earnings, January 1, 1950			3,500
Retained Earnings, January 31, 1950 (see position statement)			$ 3,215

* Exclusive of administration charges of $700 assigned to factory cost.

ELTON RUBBER COMPANY

Schedule I

Factory Cost of Sales

Month of January, 1950

Inventory of Finished Goods, January 1, 1950			$ 4,000
Inventory of Work in Process, January 1, 1950		$ 3,100	
Factory Costs Put into Process—			
Materials (Schedule II)	$4,350		
Direct Labor	4,600		
Factory Supervision	1,225		
Heat, Light, Power	600		
Factory Depreciation and Maintenance	1,150		
Other Manufacturing Overhead Costs	1,885		
Spoiled Work Cost	300	14,110	
Total Factory Costs		$17,210	
Less:			
Cost of Work Spoiled	$ 300		
Inventory of Work in Process, January 31, 1950	2,900	3,200	
Cost of Goods Completed			14,010
Total Goods Available for Sale			$18,010
Final Inventory of Finished Goods			4,110
Factory Cost of Goods Sold			$13,900

ELTON RUBBER COMPANY

Schedule II

Factory Materials and Supplies

Month of January, 1950

Inventory, January 1, 1950		$4,000
Purchased during January		5,200
Total Available for Use		$9,200
Used, per requisitions, as follows:		
Heat, Light, Power	$ 50	
Factory Maintenance	100	
Other Manufacturing Overhead	200	
Production (raw materials)	4,350	4,700
Inventory, January 31, 1950		$4,500

ELTON RUBBER COMPANY

Position Statement

January 31, 1950

Assets

Current:			
Cash on Hand and in Bank		$ 6,300	
Accounts Receivable	$14,000		
Less Allowance for Outstanding Discounts	50	13,950	
Inventories (at cost)—			
Materials and Supplies	$ 5,600		
Work in Process	2,900		
Finished Goods	4,110	12,610	
Insurance, Advertising, and Taxes Prepaid		1,350	$ 34,210
Fixed:			
Leasehold (net amortized value)		$11,900	
Buildings and Equipment—Cost	$62,000		
Less Allowances for Depreciation	5,970	56,030	67,930
			$102,140

Equities

Current Liabilities:		
Accounts Payable	$13,000	
Notes Payable	5,000	
Payrolls, Commissions, and Interest Accrued	925	$ 18,925
Stockholders' Equity:		
Capital Stock (800 shares, par $100)	$80,000	
Retained Earnings	3,215	83,215
		$102,140

shown as a single figure supported by a special schedule (Schedule I, page 596) and the materials charge in this schedule is in turn supported by a further tabulation (Schedule II, page 597). The distribution and unassigned administration costs, on the other hand, are exhibited in some detail. It would be possible to condense further by

eliminating the subheads under distribution and administration from the main report and showing them, if at all, in subsidiary schedule form.

It was pointed out in Chapter XXVI that costs of administration and office operation may be viewed as assignable, as a matter of principle, to production or factory costs on the one hand and distribution charges on the other. In this illustration no allocation of such costs to the distribution group has been attempted.

Position Statement Based on Work Sheet. The position statement of the Elton Rubber Co., based on the completed work sheet appearing on pages 592–593, is shown on page 596.

The form followed here is similar to that employed in earlier illustrations. The statement is condensed in some measure by the use of a single figure for cash, by showing factory materials and supplies, office supplies, and shipping supplies as one item, by combining insurance, advertising, and taxes prepaid, by combining the four plant accounts, and by reporting the three accrued liabilities as one amount.

Entries for Dividend Appropriations. To illustrate entries for dividends appropriated at the end of the period assume that in the case of the Elton Rubber Co. the board of directors declare a dividend of $800 at the close of business January 31, 1950, payable on February 15 to stockholders of record on February 5, and that no entries reflecting this action are included in the trial balance. If entries debiting income (or a special account) and crediting dividends payable, in the amount of $800, are included in the regular way in the work-sheet adjustments the amount of such debit may be listed in the debit income-statement column and the credit carried to the credit position-statement column as a liability. Then the balancing figure for the last four columns of the work sheet—all other data remaining unchanged—becomes a deficit after dividends or decrease in retained earnings of $1,085. Another possibility is to charge the amount of dividends to retained earnings and omit the effect entirely from the income-statement columns. The concluding figure of the work sheet will then be the net loss to stockholders, and the dividend charge must be picked up as a special item in the process of preparing an income statement based on the work sheet.

The use of this example is not intended to suggest that dividends may in general be appropriated in the face of net losses. At the same

time it may be noted that there is nothing necessarily improper in the appropriation of a dividend from retained earnings during a period of loss, particularly where the period is short and the particular operating result is due to a seasonal slump.

Supporting Working Papers. The general work sheet represents the backbone of the system of working papers employed by the accountant at the close of the period. All of the underlying periodic schedules and compilations, in other words, are tied together and controlled by the columnar summary of ledger accounts, adjusting entries, and statement data.

The importance of the subordinate working papers should be emphasized. In addition to facilitating the preparation of the work sheet itself, the auxiliary tabulations and analyses, if systematically compiled and filed, furnish essential reference material supporting the adjusting entries and are helpful in the making of the special schedules often required to supplement the principal financial statements. The need for complete working papers is particularly acute where the work of determining and recording periodic adjustments, and of preparing reports, is in whole or in part in the hands of an outside professional accountant.

Among the underlying working papers are the compilations and confirmations arising in connection with the verification and reconciliation of cash and bank balances, the audit and analysis of receivables, including adjustments for interest, bad debts, and other factors, the checking and valuation of investments, the determination of insurance expired and unexpired, the ascertaining of payrolls accrued and other accrued liabilities. Supporting computations and schedules—sometimes quite extensive—are likewise required in connection with the audit of plant additions and retirements, the accrual of depreciation, and the handling of the inventory summaries and adjustments. In some cases abstracts of particular journals and other records, or of particular accounts, are prepared. Special cost classifications and distributions, in addition to those records regularly maintained as a part of the internal accounting procedure, are often required. The schedules and lists prepared in reconciling subsidiary ledgers and controlling accounts may also be viewed as a part of the system of periodic working papers. Extracts from contracts, and copies of authorizations and communications of various kinds, are not infrequently included in the auditor's working papers. Where

the enterprise involved is incorporated schedules covering transactions affecting capital stock and retained earnings may be prepared. Needless to say the periodic working papers, like the more formal accounting records, will vary in extent and character with the size and nature of the enterprise, and the accounting procedures employed.

Questions

1. Explain the use of special columns for manufacturing cost in the case of a work sheet for a manufacturing enterprise.

2. Give illustrative entries in journal form covering the following: (a) process of accumulating costs in the original manufacturing cost accounts; (b) adjustment of manufacturing costs at close of period; (c) closing of adjusted manufacturing costs to work in process; (d) transfer of cost of work completed to finished goods; (e) recognition of cost of goods shipped. Indicate the nature of the cost records supporting the summarizing entries on the general books.

3. What treatment should be accorded cost of spoiled work? Inventory shortage or overage?

4. Explain the nature of a supporting schedule for factory cost of sales. For the element of direct materials cost applicable to current sales.

5. Discuss the treatment in the work sheets of entries covering dividend appropriations.

6. What does the phrase "working papers," broadly used, comprehend?

XXXI

CONSIGNMENTS AND BRANCH ACCOUNTS

Consignments—Use of Special Accounts. Deliveries to sales agents are bailments rather than actual sales. Title to merchandise so delivered remains with the consignor until the goods are disposed of by the consignee, and recognition of revenue and receivables is postponed until the agent's report of sales is received.

The traditional method of accounting for consignments to agents on the principal's books involves the use of special accounts designed to show the cost of goods consigned, the expenses incurred in shipping and selling, and the amount of consignment sales. Assume, for example, that the Manton Co. makes a shipment of produce to the Chicago Co., commission merchants, on consignment, to be sold at the best available market prices. The book cost of the goods to the Manton Co. is \$2,000. The agreement provides that the Chicago Co. may deduct all transportation and handling charges, and a commission of 10% of selling price. A few days later the Chicago Co. reports the sale of the entire shipment, and sends a check for \$2,300, the net proceeds. The agent's statement shows the following: total amount received, \$2,800; transportation and other deductible charges, \$220; commission deducted, \$280; net proceeds, \$2,300. With these conditions the following scheme of entries would be appropriate:

(1)

Consignments—Chicago Co.	\$2,000	
Merchandise		\$2,000
To record shipment to agent		

(2)

Chicago Co..	2,800	
Consignment Sales		2,800
To record sales as reported		

(3)

Cash	2,300	
Chicago Co..		2,300
To record agent's remittance		

(4)

Merchandise Cost of Consignment Sales	2,000	
Commissions	280	
Transportation and Handling	220	
Consignments—Chicago Co.		2,000
Chicago Co..		500
To record consignment costs		

Under this procedure the amount of any transportation charges or other costs paid directly by Manton Co. would also be charged to the consignment account. If the agent sold the goods on account, without assuming the receivables, the consignment account should be closed and accounts receivable as reported by the agent should be opened. This would be desirable procedure even where collections were handled by the agent, for the consignor's account, as the accounts under these circumstances belong to the principal rather than the agent and the vendor must depend upon the actual customers for the satisfaction of the indebtedness. Another variation, requiring the use of a temporary liability account, occurs where the agent remits the entire proceeds and is, in turn, paid by check for services rendered and costs incurred. Advances made by a consignee prior to actual sale may be credited directly to the consignment account or may be recorded in a special liability account—the latter treatment being the more sound from the standpoint of careful presentation of all phases of the situation in financial statements prepared while the transaction is in progress.

Memorandum Consignment Accounts. Under another approach to the problem of accounting for consignments a memorandum record of shipments to agents is maintained but no formal entries are established prior to receipt of the agent's report of sales. As has been indicated, goods out on consignment remain the property of the shipper and should be included in inventory instead of being reported as receivables. There is, therefore, no compelling reason for recording the fact of consignment by means of ledger entries. This approach has the advantage of postponing the formal recognition of the cost of goods consigned until actual sales are reported, or even until the close of the accounting period. Applying this general method to the example given above, there would be no ledger en-

tries on the occasion of consignment. When the sale of the consignment was reported (and assuming the check had not yet been received) the transaction would be recorded as a regular sale, as follows:

Chicago Co.	$2,800	
Sales		$2,800

The deductions for commissions and other charges might then be recognized by credits to the gross claim against the Chicago Co.:

Commissions	$280	
Transportation and Handling	220	
Chicago Co..		$500

The receipt of the check for the net proceeds, accounted for as other remittances by customers, would be recorded as follows:

Cash	$2,300	
Chicago Co..		$2,300

The entries recognizing merchandise cost of sales could be recorded at this point, if the data were conveniently available and it were desired to pull the various parts of the transaction together; otherwise this step would be postponed and would become a part of the regular entries at the end of the period. It should be noted that the use of memorandum records at the time of shipment does not preclude the employment later of revenue and cost accounts with special designations to facilitate the segregation of the results of each consignment, of the dealings with a particular agent, of all consignment business, or any other grouping desired.

Treatment of Consignments as Actual Sales. Where the relation between principal and agent is solidly established, and sale regularly follows shipment at a price fixed by the consignor, it would be possible, and often convenient, to invoice consignments at expected sale value and handle the transaction as an actual sale. Suppose, for example, that the M Co. consigns to the R Co., a regular agent, its monthly quota of 1,000 units, the established selling price being $2 each. If booked as a sale the consignment would be recorded as follows:

R Co.	$2,000	
Sales		$2,000

Then as the sales reports come in the charges for commissions and other deductions would be accrued, the agency account being credited. Assuming commissions of $300 and other charges of $200 the following entries would be required:

Commissions.	$300	
Transportation and Handling	200	
R Co.		$500

The R Co. account would also be credited for remittances by the agent as received. Assuming that there were no returns, and that the entire quota was disposed of without price adjustment in the period in which consigned, no amendment of the sales account would be needed and merchandise cost of sales would be recognized as a part of the regular entries for the period. If, on the other hand, the agent held unsold goods at the end of the M Co.'s fiscal period the accounts as they appeared on the vendor's books would be somewhat misleading. The balance in the R Co. account would not be a true receivable and the sales account would be overstated by the amount of unsold goods at selling price. The most satisfactory adjustment, under these circumstances, would be to reverse the original entries (debit Sales and credit R Co.) for the amount of unsold product in the agent's hands, and to take the goods out on consignment into the inventory at cost value. Then at the opening of the next period the adjusting entries would in turn be reversed, restoring the original condition. An alternative method of adjustment consists of setting up special allowance or contra accounts for the amount of estimated commissions, other charges, and earnings represented in unsold goods in the hands of agents. The allowances are established by charges to the overstated revenue accounts and the accounts of agents less the contra credits are taken into inventory. On the whole this form of adjustment is cumbersome and is more likely to lead to confusion and error than the procedure recommended.

Granting the convenience under some circumstances of accounting for deliveries to established agents as regular sales it may still be concluded that this approach to the treatment of consignments should not be encouraged. In many cases the consignor is in no position to fix prices and the prices that will be realized are not definitely known upon the date of consignment. Here, clearly, it is impracticable to view consignments as sales. Further, in those situations in which prices are under the control of the consignor it may still be

necessary, in view of changing conditions, to make adjustments from time to time, while particular consignments are in process of disposition, and this fact, coupled with the possibility of returns, the uncertainty as to the amount of deductions, and other complications, makes it preferable here also to base revenues on actual sales rather than on consignments.

Segregation of Costs of Consignment Sales. The procedures outlined above assume that it is feasible to isolate the cost of merchandise and the other charges applicable to each shipment or consignment. With respect to transportation charges and commissions this would ordinarily not be difficult, and in many cases the book cost of the merchandise shipped can be determined without great inconvenience. It should be pointed out, however, that in general there is no peculiar quality in consignment transactions, as compared with sales under other circumstances, which makes it practicable to ascertain and segregate all operating costs in terms of particular shipments of goods. In view of this fact it is not wise to emphasize unduly procedures designed to disclose intermediate and incomplete margins applicable to each consignment transaction. Classification of revenues and costs by types of products and by departments and other functional divisions is much more important as a rule than classification by methods of shipment and selling procedure. On the other hand, there is no objection to the isolation of revenues and costs in terms of particular shipments where the circumstances are such as to make possible the ready determination of dependable figures.

Consignment Records. Systematic files of consignment invoices, reports of agents, and other underlying records should be maintained in all cases. If desired a columnar consignment form can be readily designed which may be substituted for (or used to supplement) the ordinary ledger accounts. The nature of such a record is suggested by the example on the two following pages. Under some circumstances the use of a specially ruled subsidiary card or sheet for each consignment—or for all consignments to a particular agent—is to be recommended. This is particularly desirable where a consignment will be sold by the agent in various lots over a considerable period, and the sales are covered by a number of agent's reports.

Branch Sales. In lieu of employing outside agents many enterprises use one or more branches, established within their own organiza-

CONSIGNMENT

Date	No. of Consignment	Agent	Gross Proceeds	Deduc	
				Commission	Freight

tions, as sales outlets. Such branches vary greatly in size and in scope of authority and operating activity. Some are large stores, carrying a full line of merchandise; at the other extreme are small establishments with a stock restricted to samples. In many cases goods handled are acquired only through the main office; in other branches the manager is permitted, under certain conditions, to make purchases from outside sources. Some branches have charge of credits and collections, deposit receipts locally, and have authority to meet expenses by drawing upon the branch bank account; others have little or no control of accounts receivable, remit all receipts to the main office (usually through the medium of a local depository), and disburse cash only for small current items, from an imprest fund under the control of the general administration.

Under a fully centralized system of branch operation all principal accounting records are maintained by the home office. Sales and merchandise cost of sales are recognized on the bases of regular reports from the branch, and branch accounts receivable are treated as are the accounts of other credit customers. If desired, ledger entries recognizing deliveries of merchandise to branches may be employed, as in the case of consignments to agents, although this procedure is not essential. In any event underlying records of shipments to branches must be maintained, and proper control and audit of branch operation established.

Under a decentralized scheme of control the branch maintains a more or less complete system of books and accounts, self-balancing, and tied into the general books at the main office through the use of one or more complementary, interlocking accounts. Shipments to branches are charged to branch account on the general books and credited to main office account on the branch books. As sales are

RECORD

tions		Net Proceeds	Cost of Goods	Margin	Amount Received	Balance
Other Charges	Total					

reported by the branch the branch is charged on the main books and sales account is credited. Remittances from the branch are charged to cash and credited to the branch. In the case of branch sales on a credit basis, with billing and collection handled by the branch, the individual customer's accounts will appear only on the branch books.

Use of Branch Books Illustrated. A simple example will serve to make clear the general procedure involved where a system of branch books is employed. The M Co. establishes a selling branch under the immediate control of a special manager. It is decided to employ a self-balancing scheme of branch accounts. The conditions under which the branch is to be operated are as follows: (1) all merchandise is acquired from or through the main office and is invoiced at cost; (2) under certain conditions branch credit sales are allowed; (3) the local manager is responsible for collection of branch account sales; (4) all receipts by the branch (other than from the main office) are deposited in the local bank; (5) no checks are drawn on the local depository other than those covering remittances to the main office; (6) specified branch expenses are paid in cash by the local manager from an imprest fund established and replenished by checks received from the main office; (7) at the end of each accounting period a complete inventory is taken on a cost basis; (8) income accounting on the branch books is restricted to a sales account and an operating account charged with cash expenditures from the imprest fund.

During the first period of operation the transactions which affect the branch books are—in summary—as follows: (1) initial cash advance from home office, by check, $1,000; (2) check for initial remittance from main office is cashed locally and the proceeds are divided between a change fund of $100 and the manager's imprest fund of

$900; (3) deliveries of merchandise to the branch, at cost, $30,000; (4) branch cash sales, $25,000; (5) branch credit sales, $2,500; (6) collections on account, $2,000; (7) amount deposited in branch depository, the Commerce Bank, $27,000; (8) remittances to main office, $26,500; (9) checks received from main office to replenish imprest fund, $2,500; (10) operating charges paid in cash by manager from imprest fund, $3,000. At the end of the period the cost of merchandise on hand at the branch is $7,500, and supplies on hand amount to $100. For convenience it will be assumed that there are no other branch assets and no accrued liabilities.

With these conditions the entries on the branch books through the period are as follows:

(1)

Cash	$ 1,000	
Main Office		$ 1,000
To record receipt of initial advance		

(2)

Imprest Fund	900	
Change Fund	100	
Cash		1,000
To record establishment of special funds		

(3)

Merchandise	30,000	
Main Office		30,000
To record receipts of merchandise		

(4)

Cash	25,000	
Sales		25,000
To record cash sales		

(5)

Accounts Receivable	2,500	
Sales		2,500
To record credit sales		

(6)

Cash	2,000	
Accounts Receivable		2,000
To record collections		

(7)

Commerce Bank	27,000	
Cash		27,000
To record deposits		

(8)

Main Office	26,500	
Commerce Bank		26,500
To record remittances to home office		

(9)

Cash	2,500	
Main Office		2,500
To record receipt of replenishing checks		
Imprest Fund	2,500	
Cash		2,500
To record cashing of replenishing checks		

(10)

Operating Costs	3,000	
Imprest Fund		3,000
To record expenditures from fund		

The trial balance of the branch books at this point—in the order in which the accounts appear in the above entries—stands as follows:

	Dr.	Cr.
Main Office		$ 7,000
Imprest Fund	$ 400	
Change Fund	100	
Merchandise	30,000	
Sales		27,500
Accounts Receivable	500	
Commerce Bank	500	
Operating Costs	3,000	
	$34,500	$34,500

The adjusting and closing entries on the branch books are as follows:

(1)

Supplies	$ 100	
Operating Costs		$ 100
To recognize inventory of supplies		

(2)

Main Office	22,500	
Merchandise		22,500
To charge main office with merchandise cost of sales		

(3)

Sales	27,500	
Main Office		27,500
To credit main office with sales		

(4)

Main Office	2,900	
Operating Costs		2,900
To charge operating costs to main office		

After these entries are posted the books of the branch show final balances as follows:

	Dr.	Cr.
Main Office		$ 9,100
Imprest Fund	$ 400	
Change Fund	100	
Merchandise	7,500	
Accounts Receivable	500	
Commerce Bank	500	
Supplies	100	
	$ 9,100	$ 9,100

Where the branch handles two or more main kinds of merchandise, and reports of sales and costs by classes of goods are desired, a more elaborate scheme of accounts is required. Similarly branch expenses may be classified into a group of accounts.

It is assumed that no problem of spoilage or other special form of loss is involved. The assumption that expenses incurred at the branch are largely on a cash basis and are paid from the imprest fund is made for the sake of simplifying the illustration. Branch costs, like charges originating in the main office, may be incurred on account, and there are likely to be liabilities outstanding at the end of the period.

Branch Entries on General Books. On the books at the main office, assuming that it is desired to segregate the principal elements of the branch situation, the entries covering the branch transactions of the above example are:

	Dr.	Cr.
(1)		
Branch Cash	$ 1,000	
Exchange Bank		$ 1,000
To record initial deposit with branch manager		
(2)		
Branch Merchandise	30,000	
Merchandise (or Finished Goods)		30,000
To record deliveries to branch		
(3)		
Branch Current	27,500	
Branch Sales		27,500
To charge branch with sales reported		
(4)		
Cash	26,500	
Branch Current		26,500
To credit branch with remittances		
(5)		
Branch Current	2,500	
Exchange Bank		2,500
To charge branch with replenishing checks		

(6)

Branch Operating Costs	3,000	
Branch Current		3,000
To credit branch with expenditures reported		

At the end of the period the following additional entries are required to recognize the inventories of branch merchandise and supplies:

(1)

Merchandise Cost of Branch Sales	$22,500	
Branch Merchandise		$22,500

(2)

Branch Current	100	
Branch Operating Costs		100

At this stage the debit balances in the branch cash, merchandise, and current accounts total $9,100, the amount of the balance of the main office account on the branch books.

Under this treatment branch sales, merchandise cost of sales, and expenses incurred at the branch appear on the main office books without cancellation, and these figures may be summarized through the use of a branch expense and revenue account. Where a concern has more than one branch it is generally desirable to maintain a separate group of operating accounts for each branch. The balance of a branch expense and revenue account, it should be noted, does not represent the net income (or loss) of the branch unless all general costs incurred directly by the main office and assignable to branch sales are included. Under an alternative procedure branch sales, merchandise cost of sales, and expenses incurred at the branch appear on the branch books, while the main books reflect only the operating balance. Through the introduction of duplicating accounts it is of course possible to show the entire story on each set of books.

In the example the accounts receivable as such appear only on the branch books. (The branch current account on the main books covers the amount receivable from the branch on current business, including collections not yet remitted to the extent that total branch cash exceeds the original deposit with the branch manager, plus the amount of branch supplies on hand). If receivables were handled by the main office—other features remaining unchanged—it would be necessary to open accounts on the general books with credit customers as reported from the branch. Such accounts might be controlled

by the regular account with receivables or by a separate account. On the branch books a debit to "main office" would replace the charge to accounts receivable.

Invoicing Branch Shipments. On what price basis should deliveries to branches be invoiced? This is a central question of branch accounting and has been much discussed. There are four principal possibilities: (1) merchandise cost or approximate cost; (2) total estimated cost, including direct and indirect operating charges incurred to the date of delivery; (3) current selling price; (4) an arbitrary figure. If no branch books are to be kept it is also possible to consider invoicing in terms of quantities only. For most situations the first or second bases mentioned are to be recommended. If branch shipments are priced at cost the branch manager is familiar with the margin on which operation is being conducted and is in a position to act intelligently and effectively in his dealings with customers. Further, the accounts of both branch and main office are on a sound and understandable basis if costs are employed throughout, and no complex adjustments are required. On the other hand there is a technical objection to the use of cost figures in cases where it is difficult or inconvenient to ascertain the actual cost of goods shipped in terms of individual consignments. The use of selling value is sometimes recommended on the ground that branch merchandise records based on selling prices are especially valuable for general control and inventory purposes. This plan is not very satisfactory where selling prices are subject to frequent change and adjustment. Invoicing at selling price is also somewhat objectionable in that it involves an apparent recognition of increased values not validated by sale, and care must be taken, where this procedure is followed, to exclude all mark-ups applicable to merchandise on hand from assets and revenues. The use of an arbitrary price, finally, is sometimes supported on the ground that in some situations it is unwise to permit the branch manager to become acquainted with actual costs and margins, and that employing nominal figures is preferable to the use of uncertain and fluctuating selling prices.

Where the goods sold through the branch have been manufactured by the company the use of the cost basis of invoicing branch deliveries means that the branch merchandise account is charged with total cost as accumulated through the cost system, the account with finished goods being credited.

Invoicing to Branch at Selling Price. If selling prices are used in accounting for deliveries to branches the branch books will show an operating debit balance—excess of costs over sales—to the amount of all costs other than merchandise recognized on such books, plus any loss due to unfavorable price changes or shrinkage and less any margin due to price increases or overage. On the general books it is necessary to credit some memorandum account, such as "shipments to branches" for the amount of the deliveries charged to the branch at selling price. To illustrate, assume that the M Co. ships goods to a branch priced at $50,000, estimated selling value, that sales are made by the branch totaling $40,000, that the inventory at selling price amounts to $9,500, that expenses recorded on the branch books amount to $3,000, and that according to data compiled at the main office at the close of the period the merchandise cost of branch deliveries is $30,000. Assume, further, that since the cost of goods shipped to the branch is 60% of total selling price the amount of such cost applicable to the present inventory is 60% of $9,500, or $5,700, and that the balance of such cost—which includes the effect of unfavorable adjustments during the period—is applicable to current sales. Under these conditions, and ignoring remittances and all other features, the entries on the branch books might take—in summary—the following form:

(1)		
Merchandise	$50,000	
Main Office		$50,000
(2)		
Cash (or equivalent)	40,000	
Sales		40,000
(3)		
Operating Costs	3,000	
Cash (or equivalent)		3,000
(4)		
Sales	40,000	
Main Office	3,500	
Merchandise		40,500
Operating Costs		3,000

On the general books the following entries would be in order:

(1)		
Branch Merchandise	$50,000	
Shipments to Branch		$50,000

(2)

Branch Current	40,000	
Branch Sales		40,000

(3)

Branch Operating Costs	3,000	
Branch Current		3,000

(4)

Merchandise Cost of Branch Sales	24,300	
Merchandise		24,300

(5)

Shipments to Branch	40,500	
Branch Merchandise		40,500

(6)

Branch Expense and Revenue	27,300	
Merchandise Cost of Branch Sales		24,300
Branch Operating Costs		3,000

(7)

Branch Sales	40,000	
Branch Expense and Revenue		40,000

The branch books now show a credit balance of $46,500 in the main office account. The general books, in turn, show a debit balance of $37,000 in the branch current account. The excess of the balance shown on the branch books is $9,500, precisely the amount of the inventory at the branch, at selling price, and displayed on the general books in the balance of the memorandum accounts "branch merchandise" and "shipments to branch."

A similar procedure can be readily established to provide for situations in which nominal prices, rather than either costs or selling values, are used in invoicing shipments to branches.

Foreign Branches—Branch Accounts. Branches located in foreign countries present a special problem in that their sales and receivables (and other elements involved) commonly appear on the branch books in terms of the foreign currency in which the transactions are effected, and conversion into domestic money terms is necessary in incorporating the data of branch operations and financial position into the home office records.

A simple example will serve to illustrate the principal questions of conversion and general procedure involved. The M Co. establishes a selling branch in London. The branch is financed at the outset by a deposit of £2,500, the cost to the home office being $10,000. During the first period of branch operation merchandise to the

amount of \$50,500, invoiced at cost, is shipped to the branch, and is recorded on the branch books in pounds at the exchange rates prevailing when the respective shipments are received, the total being £12,500. The data of branch operation for the period are as follows: (1) sales, £18,000; (2) collections, £16,000; (3) operating costs, £5,000; (4) remittances to home office, £12,000 (amounting to \$48,600 in domestic currency at the rates prevailing as remitted). For convenience it will be assumed that the branch owns no fixed assets and that there are no liabilities at the end of the period. At this point, before adjusting entries are made, the branch books (in condensed form) stand as follows:

	Dr.	Cr.
Cash (in bank and on hand)	£ 1,500	
Merchandise	12,500	
Operating Costs	5,000	
Sales		£18,000
Accounts Receivable	2,000	
Home Office		3,000
	£21,000	£21,000

(If desired the home office account on the branch books might be subdivided for the purpose of showing remittances and other major components separately.)

The inventory of merchandise at the branch, priced at actual cost, is £2,000. The adjusting and closing entries at the branch, assuming operating results to be summarized on the branch books, are:

(1)

Merchandise Cost of Sales	£10,500	
Merchandise		£10,500
To recognize merchandise cost of sales		

(2)

Expense and Revenue	5,000	
Operating Costs		5,000
To close operating costs		

(3)

Sales	18,000	
Expense and Revenue		18,000
To close sales		

(4)

Expense and Revenue	10,500	
Merchandise Cost of Sales		10,500
To close merchandise cost		

(5)

Expense and Revenue	2,500	
Home Office		2,500
To close operating balance into home office account		

The home office account on the branch books now has a credit balance of £5,500, represented by cash to the amount of £1,500, merchandise on hand totaling £2,000, and accounts receivable of £2,000.

Foreign Branches—Home Office Accounts. Continuing the above example, the accounts at the home office, prior to the receipt of report of branch operations, would show the following balances relating to the London branch—assuming that separation of the major elements is desired:

	Dr.	Cr.
London Branch—Cash Deposit.	\$10,000	
London Branch—Merchandise	50,500	
London Branch—Receipts		\$48,600

At the end of the period, when the data of branch activity are available, the adjusting entries may be confined to a recognition of the disposition of merchandise and realization of the branch operating balance, no attempt being made to set up branch sales and operating charges. With respect to merchandise inventory, valued on a cost basis, the problem of conversion can be simplified in a measure by assuming either that the inventory is made up from the most recent shipments to the branch, or that it represents a cross section of all shipments. It would of course be possible, and convenient, to convert the inventory at the rate of exchange prevailing on the closing date, thus taking into account the loss or gain inhering in the inventory as a result of exchange fluctuation, but this would mean a shift from the strict cost basis of valuation. In this case it will be assumed that the first-in, first-out interpretation is employed and that by an examination of invoices to the branch, and rates of exchange prevailing on the respective dates thereof, the inventory valued in foreign currency at £2,000 is found to have a cost in dollars of \$8,100. The operating balance, the resultant of numerous items of revenue and cost, may be converted through the use of a simple average of exchange rates (based on quotations from day to day, or week to week, as desired). This recommendation assumes that it would not be expedient to attempt to convert this balance in terms of the underlying components, at the rates prevailing when these components

appeared on the branch books. Assuming an average rate for the period of 4.04 for the case in hand, the branch operating balance of £2,500 would amount to $10,100 in domestic money.

The adjusting entries on the home office books at the end of the period accordingly are:

(1)

London Branch—Current	$42,400	
London Branch—Merchandise		$42,400
To adjust branch merchandise account to inventory basis of $8,100		

(2)

London Branch—Receipts	48,600	
London Branch—Current		48,600
To close out temporary receipts account		

(3)

London Branch—Current	10,100	
London Branch—Income (special designation if desired		10,100
To recognize branch operating balance		

The "income" balance of $10,100 is subject to any charges on the home office books which are properly applicable to branch operation.

Under this scheme of entries the "current" branch account shows a debit balance of $3,900 (being the charges to the branch for cost of merchandise sold and operating balance, less the amount received from branch), the branch merchandise account shows merchandise on hand of $8,100, and the original deposit remains at $10,000. The three accounts together total $22,000, as compared with a home office account on the branch books of £5,500. If the exchange rate at this time is assumed to be 4.05 this means that the cash, receivables, and merchandise abroad have a value in domestic currency, granting that conversion might be possible without loss in value, of $22,275. The difference of $275 may be said to represent an implicit gain due to fluctuations in the exchange rates and methods of conversion employed. If it were desired to reconcile the interlocking accounts on the branch and home office books in terms of the current rate of exchange, it would be necessary to credit a special adjustment account on the home office books, debiting the current branch account with this amount. However, in view of the fact that the assets in the hands of the branch may not be liquidated and remitted to the home office for some time, and that further movement in exchange rates

may be anticipated, it may be argued that such an adjustment is not imperative, at least in so far as ledger procedure is concerned.

If it is desired to recognize the complete data of branch sales, merchandise cost of sales, and operating charges on the home office books, this may readily be done by converting the various figures for branch operations at average rates of exchange and recording the results on the main books by means of some such scheme of entries as shown earlier in discussing the procedures applicable to domestic branch establishments. It would also be possible to recognize the outstanding accounts receivable of the branch as a separate item on the home office books, instead of incorporating this balance in a "current" account as was done in the illustration. The same would be true of any other specific asset (or liability) balance on the branch books.

Foreign Branch Data in Financial Reports. In preparing a complete income report for a company with one or more foreign branches, it is desirable that sales and all other essential data be presented in terms of domestic currency, and separate conversion of all principal operating figures is necessary in this connection. If only the operating balance shown by the branch books has been converted in adjusting the books of the main office, as illustrated above, the additional conversions may be made in the form of a supplementary schedule or work sheet, as suggested by the following:

LONDON BRANCH

Income-Statement Data

	Pounds	*Rate*	*Dollars*
Sales	18,000	4.04	72,720
Merchandise Cost of Sales	10,500	4.04	42,420
Branch Operating Costs	5,000	4.04	20,200
Operating Balance			10,100

The balance derived in this manner, $10,100, agrees with that obtained (see preceding section) by converting the reported operating balance of the branch, £2,500. This balance, as indicated earlier, is subject to applicable charges incurred in dollars by the home office.

In the preparation of a complete position statement for a company with a foreign branch it is necessary to incorporate all branch assets and liabilities of the statement date, and this requires conversion of each item at an appropriate rate. In this connection it is usually held that the cash balance—and the figures for other highly liquid

assets—should be converted at the rate prevailing on the date of the statement. With respect to current liabilities, likewise, the use of the current rate is advocated. In the case of the inventory the use of either the current rate or an average rate is deemed satisfactory by most accountants. As pointed out in the preceding section, conversion in terms of recorded costs, through the use of the first-in, first-out approach, is appropriate from an income-statement standpoint. To attempt a precise conversion as of the various dates of origin involved is generally impracticable for current assets and current liabilities, although often recommended for the balances of fixed assets and long-term liabilities. The following schedule, based on the final balances of the London branch as given in preceding sections, indicates the nature of the process of conversion:

LONDON BRANCH

Position-Statement Data

	Pounds	*Rate*	*Dollars*
Cash	1,500	4.05	6,075
Merchandise	2,000	*	8,100
Accounts Receivable.	2,000	4.05	8,100
			22,275

* At rates prevailing on dates of shipment, using the first-in, first-out rule, which in this case give the same result as the use of the current rate.

In connection with the conversion of branch assets and liabilities for statement purposes there is need of a special adjustment account to absorb the difference between the net branch equity resulting and the balance of the branch accounts as they stand in the home office ledger. If desired, however, the account may take the form of a supplementary record, which is appropriately revised from period to period, in lieu of a formal ledger account. See comment on conversion difference in preceding section.

Questions

1. Outline the accounting treatment of sales through special agents or commission merchants.

2. What adjustments are necessary at the close of the period where consignments are booked as actual sales?

3. Should the revenues and costs of consignment business be segregated in the accounts?

4. Outline a specialized form of account or record for consignments of large amount which will be sold by the agent over a considerable period.

5. Under what circumstances is it desirable to use a self-balancing system of

books for selling branches? Explain what is meant by "interlocking" accounts in this connection.

6. Open suitable skeleton accounts for the branch and post the entries for the example given on pages 607–608. Repeat, for the accounts at the main office.

7. List the principal alternative bases of pricing invoices covering shipments to branches and comment on each.

8. What special problem arises in connection with the handling of sales through foreign branches? Open appropriate skeleton accounts covering the example in the text and post all entries, for both branch and main office books.

9. Discuss the conversion of the statement data of a branch in connection with the preparation of statements for the business as a whole.

XXXII

INSTALLMENT SALES

Installment Sales—Treatment as Account Sales. Merchandise that has a relatively high unit price—household furniture and appliances, automobiles, office equipment, etc.—is often sold on the installment plan, and this method of sale is also widely employed in dealings in real estate. In the case of the typical installment transaction a more or less substantial down payment is required by the vendor upon delivery, and collection of the balance in regular installments—often on a monthly basis—is provided for by a written contract. Under a common form of agreement title to the property remains with the seller until payment has been made in full, and repossession is in order if the customer defaults. Under another arrangement title is transferred to the buyer and the vendor is protected through a chattel mortgage or other form of lien upon the property for the balance due.

It is not unreasonable in most situations to account for installment business in substantially the same manner as ordinary credit sales. That is, the series of claims against the customer may be set up as receivables, the sales account being credited with the total amount of the contract. This treatment, which recognizes in full any element of income or loss involved in the period of sale, can be defended on the ground that installments receivable, buttressed by a down payment and an explicit written contract, are sound receivables and therefore represent an adequate financial basis for income accounting. Such statistics as are available, in fact, show that in some fields installment sales have a higher percentage of collectibility than sales on open account. It may be added that for income-tax purposes deferred-payment transactions may be handled in the same manner as other credit sales if the taxpayer so elects.

Need for Special Treatment—Use of Cash Basis. On the other hand a case can readily be made for a special treatment of installment business. In the first place a long period of collection tends in general to magnify the vendor's risk. In the second place short-term receivables are more nearly the equivalent of purchasing power than long-term claims, however sound. Moreover, the procedure involved in handling installment contracts is somewhat more elaborate, and hence more costly, than that required for ordinary sales on account. Another feature of installment business as often conducted which makes somewhat questionable the recognition of the full contract price as revenue upon the occasion of sale is the fact that a considerable element of interest is implicit in such transactions. Where the agreement provides for a series of payments, with no mention of interest, it is nevertheless to be assumed that the contract price exceeds an adequate cash price by an amount sufficient to yield a reasonable interest charge as well as to cover estimated costs yet to be incurred, and to book interest as revenue in advance of actual accrual—in any considerable amount or for any considerable period—is definitely objectionable. This point, of course, does not apply to installment contracts which require payment of interest on unpaid balances at a specified rate in addition to total sale price.

The principal alternative to recognition of total revenue on installment transactions on the occasion of sale is a scheme of accounting for revenue in terms of cash collections. Under this procedure—in its most acceptable form—the contracts receivable are excluded from recognized assets, the property "sold" is retained in the vendor's accounts until the final installment has been collected, revenue is credited with the amount of cash received in each accounting period, and costs incurred are applied to revenue in proportion to collections. Use of the method is especially justified in cases where the amount of installment contracts entered into varies sharply between years and the contracts run for a considerable period.

Cash Basis Illustrated—Entries During Period. The M Co., for example, begins the practice of selling a particular class of merchandise on the installment plan and decides to account for revenue in this department as collections are made. During the first period 100 units, which cost $75 each, are sold on the deferred-payment plan for $100 each. The contracts entered into with customers, all of which carry the same terms, provide for payment of $10 down, and $5 per

month, per unit, for eighteen months. The contracts also provide for the payment of interest at 6% on unpaid balances, calculated monthly, from date of sale. All down payments are collected upon signing of contracts and delivery, a total of $2,000 is collected in monthly installments, and interest is collected in the amount of $125. Under these circumstances the following entries are appropriate to summarize the installment transactions of the period.

(1)		
Installment Contracts Receivable (the specific accounts)	$10,000	
Installment Contracts Contra		$10,000
To record installment contracts entered into in self-balancing memo form		
(2)		
Merchandise Delivered Under Installment Contracts .	7,500	
Merchandise		7,500
To record delivery to customers of merchandise sold under installment plan		
(3)		
Cash	1,000	
Installment Collections		1,000
To record cash received from down payments and resulting revenue		
(4)		
Installment Contracts Contra	1,000	
Installment Contracts Receivable (the specific accounts)		1,000
To record collection of down payments on individual customer sheets and control sheet		
(5)		
Cash	2,000	
Installment Collections		2,000
To record collection of monthly installments		
(6)		
Installment Contracts Contra	2,000	
Installment Contracts Receivable (the specific accounts)		2,000
To credit customer sheets with amount of monthly installment collections and charge total to control sheet		
(7)		
Cash	125	
Interest Collections		125
To record interest collected		

Under this scheme of entries the entire contract price is charged to the customer, notwithstanding the fact that 10% is immediately collected. This is desirable procedure in that it provides for a complete record of the transaction. The interest entries might of course be

combined with the entries covering the collection of installments. As a matter of underlying procedure it would be desirable to accrue interest regularly in the self-balancing memorandum accounts and reverse the entries as collections of interest are made, but this practice is not reflected in the general entries given here. Consistency requires that the interest, like the installments receivable, be absorbed in income on a cash basis.

Cash Basis Illustrated—Adjusting and Closing Entries. At the end of the first period, continuing the illustration, the following supplementary data are available. (1) One customer, who purchased one unit, defaulted on his contract after paying $20, and the merchandise, which has been recovered, has an estimated inventory value of $50; no entries have as yet been made covering this default and repossession. (2) Five customers, each of whom purchased one unit, are in arrears for one installment each, with interest totaling $2; nevertheless these balances are not considered to be uncollectible. (3) On the basis of the amount collected, excluding the total amount received on the defaulted contract, the equity of customers in merchandise delivered, in terms of cost, is 75% of $2,980, or $2,235. (4) Two customers, each of whom purchased one unit, have made the necessary payments in advance to complete their contracts.

In view of these data the following additional entries are required:

(1)

Merchandise (or a special merchandise account)	$ 50	
Merchandise Cost of Installment Collections	25	
Merchandise Delivered under Installment Contracts .		$ 75
To record recovered merchandise at estimated value and to close out cost of goods delivered on defaulted contract		

(2)

Installment Contracts Contra	80	
Installment Contracts Receivable (also specific account)		80
To close out balance of defaulted contract		

(3)

Merchandise Cost of Installment Collections	2,235	
Customers' Equity in Installment Merchandise . . .		2,235
To recognize portion of merchandise cost applicable to adjusted collections for period and corresponding equity of customers in outstanding merchandise		

(4)

Customers' Equity in Installment Merchandise . . .	150	
Merchandise Delivered under Installment Contracts .		150
To close out cost of goods and charge customers' equity in connection with contracts paid in full		

After these entries have been posted the following closing entries are necessary:

(1)		
Installment Collections	$3,000	
Installment Expense and Revenue		$3,000
To close revenue account to summary		
(2)		
Installment Expense and Revenue	2,260	
Merchandise Cost of Installment Collections . . .		2,260
To close merchandise cost of revenue to summary		
(3)		
Interest Collections	125	
Installment Expense and Revenue		125

The summary account now shows credits totaling $3,125 (the balance of installment collections, $3,000, plus interest, $125) and debits of $2,260 (merchandise cost, including the loss on recovered goods of $25), a balance of $865. In determining a final net, of course, all other applicable costs must be charged to this margin. See discussion, later, of the question of the application of costs to installment revenue on a cash basis.

At this point the balance of the account showing installment merchandise outstanding is $7,275. This is the amount of the original charge, $7,500, less the sum of the credits for the goods repossessed and the units covered by contracts paid in full, $225. The excess of this balance over the balance of the customers' equity account, now $2,085, amounts to $5,190, and represents the equitable interest of the M Co. in the outstanding goods. This amount, moreover, is just 75% of the total amount remaining receivable under installment contracts, $6,920, exclusive of interest.

Other Possible Adjustments Under Cash Basis. No entries are given above with respect to the amount of past-due installments and accrued interest. The amount of installments in arrears might be segregated, as a part of the self-balancing accounts, by crediting installments receivable and charging a special heading. In general proper notations on the cards of the delinquent customers, without formal entries, make an adequate record. When the delinquency is of such a character as to justify treatment as a default the merchandise should be repossessed and the customer's account credited (assuming that suit or other legal action is inexpedient).

No allowance for bad debts is required where the receivables in-

volved are recorded in self-balancing accounts which are not permitted to influence reportable asset values or revenues. A net loss on an installment transaction occurs, however, where the shrinkage in the value of merchandise, coupled with other related charges, is greater than the amount collected prior to default, but under the cash basis of recording revenue this loss is measured by the decline in merchandise value and the associated charges rather than by the uncollectible account which has never been recognized as an asset. Especially where the merchandise is not recovered the loss suffered through default may be substantial. If desired the amount of merchandise loss may be segregated in a special account.

If a default occurs in a later period, after an equity in delivered merchandise has been recognized, the adjusting entries must include a charge to the customers' equity account for the amount therein arising from collections on the defaulted contract.

Advantages of Procedure Outlined. The scheme of entries recommended here has a number of advantages over the usual treatment accorded installment sales which are being handled on a cash basis. The use of the self-balancing memorandum accounts to show installment contracts outstanding makes it possible to keep the necessary record of customers' charges, payments, and balances in debit and credit form and at the same time avoid introducing these data into the accounts on which the financial statements are based. Another desirable feature of the procedure is the special collections account to show gross revenue. The use of cash collected as the measure of revenue does not make it any the less desirable to report the total volume of revenue recognized each period in clear-cut fashion. The distinctive feature of the cash method of handling installment business is the deferring of revenue recognition until collection, and when the entire amount of a contract has been collected the credits which have been made to revenue account should equal the total contract price. (To the extent of amounts never collected, of course, the revenue account under this plan fails to disclose, at any stage, the full sale price.)

The use of the "customers' equity" account in setting up the cost of merchandise applicable to collections is also desirable, assuming that a type of contract is employed under which the vendor retains title to the goods until collection has been made in full. By means of this device—coupled with the account which shows merchandise

delivered—the precise situation is displayed. The accounts then show that the merchandise sold on installment contract, although delivered, remains a part of the inventory (in a broad sense) of the vendor, and that the buyer has acquired an equitable interest therein in proportion to the fraction of the contract price which has been paid.

Installment Accounts in Statements. Where installment sales are handled like other credit sales the full amount of sales and all costs applicable thereto are carried to the income statement for the period and the unpaid balances of installment customers' accounts are included in the position statement as receivables. Where the cash basis of recognizing revenue is employed the amount of collections should appear as revenue in the income statement, with a proper proportion of costs incurred, and in the position statement—in lieu of the balance of installments accounts—the merchandise outstanding on uncompleted contracts, together with the customers' equity therein, should be reported. Either of two methods of presentation in the statement can be supported: (1) the customers' equity account may be shown as a contra to the cost of delivered merchandise on the asset side; (2) the cost of delivered merchandise may be listed, without deduction, among the assets, the equity account then being shown as a special type of liability. The first form of display is to be preferred where full title to merchandise outstanding has not been retained by the vendor; the second form can be defended where the title does not pass to the buyer until payment has been made in full. In any event the existing conditions should be clearly reflected in the statements, and explanations should be used as needed.

It must be admitted that where the cash basis of handling installment sales is employed some difficulties of presentation are involved. It is not easy "to have one's cake and eat it too," and it is not altogether easy to maintain a record of customers' accounts and at the same time refuse to recognize such accounts as an element in financial position. Nevertheless the method of presentation suggested, although not satisfying every legal and financial condition of all installment situations, does serve to display all essential data and without doing violence to any established tradition of business reporting.

Merchandise delivered on installment sales is subject to deterioration through use by the customer and there is the added risk that

the vendor may have difficulty in effecting repossession in the event of default. In view of these conditions there is some basis for the contention that a special allowance for possible loss should be established and shown in the position statement as an offset to the vendor's net equity in goods outstanding. In many cases, however, such an adjustment would represent unnecessary conservatism. The payments made by the buyer are often more than adequate to offset shrinkage in the value of merchandise, and under the typical form of contract all payments are forfeited to the vendor in case of default.

Application of Costs to Installment Revenue. The principal defect in the accounting for installment sales on a cash basis, as ordinarily practiced, is failure to assign costs other than the cost of the property sold to installment receipts in a reasonable way. If all other costs associated with installment business are charged in full against collections when incurred, as is usually done, the result in the income statement is a tendency toward understatement of earnings in the period of sale followed by an overstatement in later periods.

A simple example will serve to illustrate the point. In the first two periods of operation the facts for a particular concern, selling goods only on the installment plan, are as follows:

	First Period	Second Period
Sales	$100,000	$75,000
Collections	40,000	85,000
Merchandise Cost of Sales	60,000	45,000
Handling, Selling, and Other Costs	25,000	18,750

If there are no defaults or other complications the comparative income data under these circumstances, according to the most common interpretation of the cash basis, are as follows:

	First Period	Second Period
Collections	$40,000	$85,000
Merchandise Cost	$24,000	$51,000
Handling, Selling, and Other Costs	25,000	18,750
Total Deductions	$49,000	$69,750
Net Earnings	$ 9,000*	$15,250

* Loss.

This treatment is unreasonable in that an important part of the total cost is charged to revenue on the sales basis rather than the

receipts basis, the avowed method of reporting. In other words, revenues and expenses are not harmoniously dealt with and do not reflect the same sections of operating activity. The correct presentation, which places all costs on the same footing in terms of recognized revenue, may be indicated as follows:

	First Period	Second Period
Collections	$40,000	$85,000
Merchandise Cost Applicable	$24,000	$51,000
Handling, Selling, and Other Costs Applicable	10,000	21,250
Total Deductions	$34,000	$72,250
Net Earnings	$ 6,000	$12,750

In the first and incorrect determination the merchandise cost amounts to 60% of collections each period and other costs amount to over 62% the first period and only 22% the second period—an absurd situation. In the revised presentation the merchandise cost is again 60% of collections each period and other costs amount to 25% of cash revenue each period—a much more reasonable picture. (The assumption made here that all costs are incurred in the period of sale ignores the fact that some collection costs and other charges may actually be incurred in subsequent periods.)

The sound treatment as outlined has been objected to by accountants on the ground that it involves setting up administrative and distribution costs as a deferred charge, and it has never won the approval of the income-tax authorities. Nevertheless it is clear that a thoroughgoing shift from the sales basis to the receipts basis of recognizing revenue requires the charging of *all* costs to revenue in terms of collections.

The matter is especially important, evidently, in situations where installment sales fluctuate sharply from period to period.

Installment Sales of Real Estate. The cash basis of reporting revenue is particularly appropriate as applied to the affairs of specialized real estate firms where sales on contract bulk heavily in particular periods and the credit term is relatively long. For example, the Bell Realty Co. buys a tract of unimproved land at a cost of $100,000, spends $50,000 in building roads and otherwise developing the property, and then puts the tract on the market in the form of 100 lots priced at $2,000 each. During the year in which the opening of

the sale occurs 70 lots are sold on contract. The terms are 10% down, and $50 per month for thirty-six months, with interest at 6% on balances. In addition to down payments, the collections of installments in the first year total $20,000; interest collections amount to $3,000. Commissions paid to salesmen amount to 5% of the total of the contract prices of all lots sold; all other costs total $16,000. There are no defaults the first year. For convenience it is assumed that no further improvement costs are incurred, or will be required in the future.

During the following year 20 lots are sold on the same terms. Collections during the year, in addition to down payments, amount to $50,000. Interest collections total $6,000. The rate of commission is again 5% and other operating costs total $8,000. Three customers, who purchased one lot each in the preceding year, default; and the contracts are canceled, without refund. In two cases only the down payment was made; in the other case two monthly installments have been collected (both in the current year). Five customers, who purchased one lot each, complete their contracts by making advance payments, and deeds are issued covering the lots involved.

The entries for the first period, beginning with the contract sales and omitting consideration of the application of commissions and other operating costs to revenue, are:

(1)

Installment Contracts Receivable	$140,000	
Installment Contracts Contra		$140,000
To record contracts receivable in self-balancing memo accounts		

(2)

Lots Sold on Contract.	105,000	
Subdivision #1 (or other appropriate title) . . .		105,000
To set up cost of 70 lots sold in separate account		

(3)

Cash.	14,000	
Installment Collections.		14,000
To record cash from down payments and resulting revenue		

(4)

Installment Contracts Contra.	14,000	
Installment Contracts Receivable.		14,000
To record collections of down payments		

(5)

Cash.	20,000	
Installment Collections.		20,000
To record collection of monthly installments		

(6)

Installment Contracts Contra.	20,000	
Installment Contracts Receivable.		20,000
To record monthly installments collected		

(7)

Cash.	3,000	
Interest Collections		3,000
To record collections of interest		

(8)

Land Cost Applicable to Collections.	25,500	
Buyers' Equity in Lots Sold		25,500
To recognize portion of land cost applicable to collections and corresponding equity of buyers		

(9)

Commissions	7,000	
Cash (or bank account)		7,000
To record commissions paid of 5% of total sales		

(10)

Other Operating Costs (appropriately classified) . .	16,000	
Cash (or equivalent)		16,000
To record other costs incurred during year		

The entries necessary to close collections and applicable costs to a summary account follow the usual form.

At the end of the first year, on the basis of these entries, the total revenue for the period (the sum of down payments, collections of installments, and interest) is $37,000. The amount of land cost applicable to this figure—determined by applying the percentage of total land cost, including improvements, to the total sales values based on present selling prices to collections, excluding interest—is $25,500. The question of the application of commissions and other costs is discussed later. In the position statement the amount of the cost of lots "sold," $105,000, should be reported as an asset, from a strict legal point of view, and the buyers' equity, $25,500, should appear as a liability. The alternative treatment is to minimize the importance of the fact that title has not passed and treat the buyers' equity as a contra to the land cost of lots sold—a very reasonable approach where there is little likelihood of defaults on a large scale.

Installment Sales of Real Estate—Entries for Second Year. The entries for the second year (aside from those covering defaults and completed contracts), conform to the same pattern, except for the changes in amounts. In condensed form they are as follows:

(1)

Installment Contracts Receivable	$40,000	
Installment Contracts Contra		$40,000
To record contracts receivable in self-balancing accounts		

(2)

Lots Sold on Contract.	30,000	
Subdivision #1		30,000
To close cost of 20 lots sold to special account		

(3)

Cash.	60,000	
Installment Collections.		54,000
Interest Collections.		6,000
To record down payments of $4,000, collections of installments of $50,000, and interest of $6,000		

(4)

Installment Contracts Contra.	54,000	
Installment Contracts Receivable.		54,000
To credit buyers' accounts with collections		

(5)

Land Cost Applicable to Collections.	40,425	
Buyers' Equity in Lots Sold		40,425
To recognize portion of land cost applicable to collections on active contracts ($54,000 less collections on defaulted contracts of $100) and corresponding equity of buyers		

(6)

Commissions	2,000	
Other Operating Costs	8,000	
Cash (or equivalent)		10,000
To record commissions paid (5% of total sales of $40,000) and other operating costs		

The entries covering defaulted contracts and recognition of completed contracts are:

(1)

Subdivision #1	$ 4,500	
Lots Sold on Contract		$ 4,500
To return cost of lots covered by three defaulted contracts to subdivision account		

(2)

Installment Contracts Contra.	5,300	
Installment Contracts Receivable.		5,300
To close balance of three defaulted contracts (total sale price, $6,000, less down payments of $600 plus two installments on one lot of $50 each) from contracts receivable		

(3)

Buyers' Equity in Lots Sold	450	
Revenue from Defaults.		450
To close to special defaults account equity of buyers in defaulted contracts (75% of down payments of $600) as recognized at end of preceding year		

(4)

Buyers' Equity in Lots Sold	7,500	
Lots Sold on Contract		7,500
To close out cost of lots against buyers' equity in case of five completed contracts—deeds issued		

The lots associated with the defaulted contracts are charged back to the subdivision account at cost, on the assumption that there has been no impairment as a result of the entire transaction.

The total revenue for the second year is the sum of the collections of installments and interest, $60,000. The item of revenue based on the elimination of the recognized equity of the defaulting buyers should also be reported in the income statement for the second year, although the fact that the cash involved was collected in the preceding period gives this element a special character. The land cost applicable to the revenues of the second year amounts to $40,425, 75% of the installment collections after the deduction of the amount collected currently on defaulted contracts.

At the end of the second period, on the basis of the entries given, the balance of the account showing cost of lots sold is $123,000, and the balance of the buyers' equity account amounts to $57,975. The difference, $65,025, represents the equity of the Bell Realty Co. in the cost of the lots attaching to active contracts, and this amount is 75% of the balance of the account with contracts receivable, now standing at $86,700.

Installment Sales of Real Estate—Application of Other Costs. The problem of applying the other operating costs in this case requires special attention. Under the usual procedure in practice, as pointed out earlier, all the charges except those representing the cost of the property are deducted in the period in which incurred. If this is done in this case the net earnings for the two years are determined as follows:

	First Year	Second Year
Cash Revenues	$37,000	$60,450**
Land Cost Applicable	$25,500	$40,425
Commissions	7,000	2,000
Other Operating Costs	16,000	8,000
Total Deductions	$48,500	$50,425
Net Earnings	$11,500*	$10,025

* Loss.

** Including amount of buyers' equity recognized in preceding year on contracts defaulted this year.

As in the example given previously these results are unreasonable. Under a fully consistent procedure, clearly, the commissions should be equitably assigned to the entire revenues, as recognized, arising from the sales to which these charges attach; and there is much to be said for a similar treatment of other costs. In the case of commissions the proper charge each year is 5% of installment collections, ignoring the question of a possible adjustment on account of defaults. For the other operating costs a sound basis of spreading is not so readily determined, particularly where such costs do not rise and fall in proportion to the movement of sales. For a situation of the character under discussion a reasonable treatment would be to estimate the total amount of the costs not directly assignable to sales which it is expected will be incurred in marketing the entire subdivision, and use the percentage of such estimated amount to total estimated sales as a basis for the application of the charges to cash revenues. If, for example, the "other" costs in this case are estimated at 15% of the total expected sales of $200,000, the amount of such costs chargeable to revenue for the first year is $5,100 (15% of $34,000, the installment collections) and for the second year, $8,100 (15% of $54,000).

If the tabulation on the preceding page is revised in accordance with these suggestions the result is as follows:

	First Year	Second Year
Cash Revenues	$37,000	$60,450*
Land Cost Applicable	$25,500	$40,425
Commissions	1,700	2,700
Other Operating Costs	5,100	8,100
Total Deductions	$32,300	$51,225
Net Earnings	$ 4,700	$ 9,225

* Including amount of buyers' equity recognized in preceding year on contracts defaulted this year.

In the foregoing illustration a number of complications often arising in the real estate field are avoided. Lots are usually varied in character and value; selling prices seldom remain fixed throughout the entire process of distribution; improvement costs are commonly incurred during the period of sale (and sometimes thereafter). The conditions assumed, nevertheless, serve to show the main features of

Contract No. *38*	Name *R. S. Fall*	Address *203 Grove St.*
Contract Price *$2,000*	Interest Rate *6%*	Date of Contract *7/6/49*
Down Payment *$200*	Installment *$50* Date *6th*	Final Date *7/6/52*
Description *Lot 81*	Subdivision *No. 1*	Salesman *J. Walsh*

Date	Amounts Due		Principal				Interest				Memo
	Principal	Interest	Date	Dr.	Cr.	Balance	Date	Dr.	Cr.	Balance	
7/6/49	200		7/6/49	2,000	200	1,800					Down
8/6/49	50	9.00	8/8/49		50	1,750	8/8/49	9.00	9.00		
9/6/49	50	8.75	9/6/49		50	1,700	9/6/49	8.75	8.75		
10/6/49	50	8.50	10/6/49		50	1,650	10/6/49	8.50	8.50		
11/6/49	50	8.25	11/7/49		50	1,600	11/7/49	8.25	8.25		
12/6/49	50	8.00									

the cash basis of reporting revenue from installments sales in this field.

Installment Sales Routine. Handling installment sales requires the adaptation of forms and procedures to suit the conditions attaching to such transactions, and where the volume of such business is large a highly specialized system is often developed. An essential feature, particularly where the cash basis of revenue reporting is employed, is a scheme of installment accounts which makes it possible to trace the entire course of the individual sale and collection record, as only where full details of each transaction are available is it possible to make precise entries recognizing costs assignable to receipts and the amount of the customers' equity. Proper adjustments covering defaults and repossessions, further, require isolation of the data of the particular sale.

In general it is desirable to maintain an account for each contract. The most significant unit for recording purposes, in other words, is the particular contract rather than the individual customer. See suggestive form above. Assuming that the cash basis is employed it is desirable that the accounts representing each year's sales be kept in a separate file or binder. It is also helpful to group accounts showing the same percentage of margin (mark-up on merchandise or other property cost). Contracts should be serially numbered and such numbers should appear on the invoices and customers' accounts.

As a rule separate files should be maintained for completed and current contracts and accounts. In some systems contract and installment account are combined in a single form.

Questions

1. Under what circumstances are sales on the installment plan common? What are the usual features of installment contracts?

2. What considerations tend to justify the recording of installment sales in essentially the same manner as other credit sales? What is there to be said for use of a cash basis of reporting revenue on installment contracts?

3. Open skeleton accounts and post the entries given in the example on pages 622–625.

4. How should past-due installments be dealt with?

5. Should an allowance for bad debts be set up in connection with installment business recorded on a cash basis?

6. Outline the special advantages of the scheme of entries outlined in the text.

7. How should the accounts showing merchandise or other property outstanding on installment contracts and customers' equity therein be presented in the position statement?

8. How should selling and other costs be applied to installment revenue which is on a cash basis? In what kinds of situations does the usual procedure produce very unreasonable results?

9. Open skeleton accounts and post the entries given in the example on pages 629–633.

10. What is the essential feature of the routine procedure employed where installment accounts are handled on a cash basis?

XXXIII

PARTNERSHIP ACCOUNTS

Nature of Partnership. A partnership is a contractual association of two or more parties to undertake some form of lawful business activity. The association is formed either by oral or written agreement and the relationship is subject to all the requirements of the law of contracts. As a rule only natural persons may become partners. In some cases a partnership in law is created if a person engages in business with one or more other persons, and permits himself to be represented to the public as a partner, even if there is no explicit contract between the parties. The joint venture—an association of individuals to carry out a single project—may or may not be considered a partnership. Joint ownership of property and sharing of profit or loss, without a condition of mutual agency, does not create a partnership.

There are a number of types of partners recognized by law or usage. The "general" partner is one having unqualified rights and status; the "silent" or "dormant" partner is a member of the firm who takes no active part in management; the "junior" partner is a member whose share in the business is small and who exerts a minor influence upon firm activities; the "secret" partner is one whose existence or identity is not known to outsiders; the "ostensible" or "nominal" partner is one who appears to be a partner, although he may not actually be a member of the firm.

The partnership, unlike the corporation, has no independent existence as a legal entity, and accordingly has no powers or obligations in its own right. The assets of the firm are owned by the partners, not the partnership, and the liabilities of the firm are the personal liabilities of the partners, jointly and severally. This means that if

the firm assets are insufficient to meet the indebtedness of the business other assets belonging to the partners may be levied upon by the creditors, and without regard to the relative investments in the firm. An outstanding disadvantage of the partnership form of organization as compared with the corporation lies in this condition of unlimited liability. In the face of serious risk of the loss of additional property no considerable number of persons can be expected to join forces as partners, and the partnership is therefore not a satisfactory vehicle for large-scale operation. The partnership is also at a disadvantage as a business enterprise with respect to continuity; the partnership is subject to dissolution upon the retirement, bankruptcy, or death of any partner, while in general the corporation is not affected—in its legal existence—by transfers of stock or any change in the status of the particular stockholder. On the other hand, the partnership as such is not subject to income taxation and is freer than the corporation at various points from government supervision and interference. Further, the control of the partner is more direct and involves less red-tape than that of the stockholder.

In some states organizations known as "special" or "limited" partnerships are provided for. Such firms, having limited liability and transferable shares, are in effect corporations and should be classed as such for accounting purposes.

An association of partners implies a sharing of profits or losses, if any, and in the absence of explicit or implicit agreement to the contrary the law commonly assumes that profits or losses shall be shared equally. Unless there is an arrangement to the contrary, moreover, each partner is assumed to have equal authority in the conduct of the enterprise.

Partnership Agreement. In some states a written contract or "articles of copartnership" is required in connection with the organization of a partnership, and in all cases the execution of a formal agreement is to be recommended. However favorable may be the auspices under which a particular firm is launched, disagreement and dissension among the members are almost sure to arise if the significant questions of management, income distribution, etc. are left to oral agreement and informal understanding.

The principal matters which should be fully covered in the agreement are: (1) the character of the business to be undertaken;

(2) the amount of capital to be contributed by the partners, and the form and manner in which payments are to be made; (3) the duties and powers of each member, or an enumeration of desired limitations of powers; (4) the rights of each partner with respect to withdrawals of cash or other property; (5) the manner in which income is to be accounted for and apportioned among the partners; (6) the amounts and handling of members' salaries or other special compensation, or a plan for determining such payments as the need arises; (7) the conditions under which a partner may withdraw from the firm, or dispose of his share; (8) the procedure to be followed in the event of complete liquidation. It is also advisable that a clause be included which provides for a proper system of accounting. The articles must of course show the name and address of the firm, the names and addresses of all partners, and other pertinent details.

Features of Partnership Accounting. Notwithstanding the fact that the partnership does not constitute an independent legal entity it usually represents a distinct business enterprise, and in general the accounts of the firm should be restricted to the affairs of the partnership undertaking as opposed to the outside interests and activities of the members. Such a system, however, has its limitations as a means of furnishing information to firm creditors, and in special circumstances the necessary supplementary data should be made available.

The peculiar features of partnership accounting arise primarily in connection with the equities of the members. As a rule two accounts are required for each partner. An investment or capital account is needed to show the amount of the original capital contribution and the changes, if any, arising from additional commitments or withdrawals of funds. A current account is also needed to register the assignment of profit or loss to the particular partner and the extent of ordinary drawings. The use of the two accounts makes it possible to draw a clear distinction between capital status and income balance, a desirable condition in the partnership as well as in the corporation.

A third type of partner's account is useful wherever the partner enters into a relation with the firm in some capacity other than that of a proprietor. If the partner becomes in effect an employee, for example, a special account may be set up to show the amount ac-

cruing in his favor as salary or wages and the amounts disbursed or drawn against such accrual. Similarly if a partner borrows from or loans to the firm, makes purchases from or sales to the organization, or enters into any other transaction in which he is one party and the partnership as a whole is the other, the use of a separate account, appropriately labeled, is desirable.

The discussion of partnership accounting in this and the succeeding chapter will center around the following: (1) entries required at organization; (2) partners' salaries; (3) division of income and treatment of drawings; (4) transactions between partner and firm; (5) admission of new partner and other forms of reorganizations; (6) liquidation and dissolution.

Organization Entries—New Enterprise. In the simplest and most clear-cut case the partners' contributions are in the form of cash or bank deposits and are made simultaneously. Assume, for example, that M and R form a partnership, and that each partner, in accordance with the terms of the agreement, contributes $10,000 in cash. The opening entries, in condensed form, are:

Cash	$20,000	
M, Capital		$10,000
R, Capital		10,000

To vary the example assume that M furnishes cash to cover his share but that R makes his contribution in the form of a parcel of land with an accepted value of $5,000 and a thirty-day, 6% note for the balance. The following entries are required:

Cash	$10,000	
Land	5,000	
Note Receivable (R)	5,000	
M, Capital		$10,000
R, Capital		10,000

Appropriate details should of course be listed to support the opening entries. Where the contributions are in whole or in part in property other than cash care must be taken to use reasonable values. In the partnership, it may be noted, there is no formal capital structure with the accompanying tendency to overstate asset values if necessary to match capitalization.

Organization of Firm Based on Existing Concerns. Assume, for example, that M and R, retail dealers in adjacent communities, decide to join forces as partners, the firm to operate both stores. Their ledgers at the date of consolidation stand as follows:

M

Dr.		Cr.	
Cash	$ 5,000	Accounts Payable	$30,000
Accounts Receivable	15,000	Allowance for Depreciation	2,500
Merchandise	40,000	M	31,000
Unexpired Insurance	500		
Prepaid Rent	500		
Equipment	2,500		
	$63,500		$63,500

R

Dr.		Cr.	
Cash	$ 4,000	Accounts Payable	$25,000
Accounts Receivable	15,000	Mortgage on Real Estate	10,000
Notes Receivable	5,000	Allowance for Depreciation	4,000
Merchandise	45,000	Interest Accrued Payable	500
Unexpired Insurance	750	R	57,750
Land	7,500		
Building	15,000		
Equipment	5,000		
	$97,250		$97,250

The assets and liabilities as shown above are turned over to the new partnership at book values except for the following adjustments: (1) accounts of customers on M's books in the amount of $2,000 and on R's books in the amount of $3,000 are considered uncollectible; (2) M's equipment is given a value of $1,000; (3) R's land is appraised at $10,000, his building at $12,500, and his equipment at $3,500; (4) interest is accrued receivable on R's notes, $100. R then contributes sufficient additional cash to give him a two-thirds interest. A new set of books is now opened for the firm. With these conditions the opening entries may be set up as follows:

(1)

Cash	$ 5,000	
Accounts Receivable	13,000	
Merchandise	40,000	
Unexpired Insurance	500	
Prepaid Rent	500	
Equipment	1,000	
Accounts Payable		$30,000
M, Capital		30,000

To record acquisition of assets, assumption of liabilities, and M's investment

(2)

Cash	$ 6,650	
Accounts Receivable	12,000	
Notes Receivable	5,000	
Interest Accrued Receivable	100	
Merchandise	45,000	
Unexpired Insurance	750	
Land	10,000	
Building	12,500	
Equipment	3,500	
Accounts Payable		$25,000
Mortgage on Real Estate		10,000
Interest Accrued Payable		500
R, Capital		60,000

To record acquisition of assets, assumption of liabilities, and R's investment

To avoid details no distinction is drawn in this example between cash on hand and cash in bank.

Organization—Irregular Capital Contributions. Where the task of getting the firm under way consumes considerable time the capital contributions may be made more or less irregularly through the period of organization, and in some cases payments for construction or other operations are taken care of individually by the partners rather than from joint funds. Assume, for example, that M and R form a partnership with the understanding that each is to contribute $40,000. At the outset no funds are deposited to joint account but while the plant is being built and materials acquired M pays bills aggregating $30,000 and R similarly expends $45,000. The following summary entries indicate the record required on the firm books:

(1)

Sundry Accounts	$30,000	
M, Capital		$30,000

(2)

Sundry Accounts	45,000	
R, Capital		40,000
R, Advances		5,000

M now deposits $5,000 in cash to firm account and pays R personally $5,000 (and any additional sum required by way of interest). The proper entries are:

(1)

Cash	$5,000	
M, Capital		$5,000

(2)

R, Advances	5,000	
M, Capital		5,000

The capital account of each partner now shows the contribution agreed upon, $40,000. Needless to say partners' expenditures in a situation of this character must be carefully audited, and in general this method of contributing capital is not to be recommended.

Salary Allowances. In many cases the time and effort which a partner devotes to the affairs of the firm are not in proportion to his relative capital interest. A junior partner who makes a small invesment, for example, may be very active in the conduct of the enterprise; in contrast a senior partner who contributes a major portion of the capital may give little attention to management. Moreover, the services furnished by the particular member may differ sharply in character (and hence in value) from those furnished by the other member or members.

The most satisfactory method of preserving equity between partners in view of unequal service contributions consists of the granting of appropriate "salary" allowances. Assume, for example, that M and R form a partnership, investing $25,000 each, and that there is a definite understanding that M must give his entire time to the management of the business while R is expected to render only incidental services. Evidently division of earnings in proportion to relative capital investments in such circumstances would be unfair. M is entitled to special compensation for personal services and the partnership agreement should provide for a reasonable assignment of income to M's account before a distribution of profits as such is effected.

Assume that it is agreed that M shall have a salary of $5,000 per year and that R shall be entitled to no allowance for personal services. With these conditions the accrual of M's salary for one year may be recorded as follows:

Administrative Salaries	$5,000	
M, Salary Account		$5,000

When payment is made the accrued salary account is charged, as in the case of an ordinary liability.

Interpretation of Partners' Salaries. How should the charge for a partner's salary allowance be accounted for? Does it represent a cost of operation or a partial distribution of net income? It is difficult to give a hard-and-fast answer. The drawing of a salary by a partner

represents a transaction between the partner on the one hand and the firm on the other, and thus has in some measure the force of an ordinary transaction between an outsider and the partnership. On the other hand a partnership does not constitute an independent entity in a strict sense and in view of this fact it is perhaps somewhat unreasonable to consider the partner as capable of acting in the dual capacity of proprietor and employee. No doubt the interpretation should vary with the circumstances. Where there are a considerable number of partners and salaries are allowed to but one or two members who are active in administration but do not have the major investments, there is practical justification for treating the salaries in question as operating charges closely akin to the cost of services furnished by outsiders. This is especially defensible where the salaries are subject to negotiation from period to period and are in no way dependent upon the presence of net profits. Where there are but two genuinely equal partners—partners, that is, who have made equal capital investments and who make substantially equal contributions of services—there is little excuse for salary adjustments, and if "salaries" are allowed in such a situation it would seem to be reasonable to interpret them as preliminary distributions of net proprietary income—an income derived from a coordination of capital and personal efforts in a business venture. Between these two extremes there lies a range of less clear-cut cases.

If the charge for a partner's salary is viewed as a preliminary distribution of income the original debit should be lodged in the income account, or in a special account which is later transferred to the income summary.

The interpretation of the credit to the partner covering a salary accrual hinges upon the significance of the charge. If the amount of the salary can reasonably be viewed as an operating cost it follows that the amount due the partner is a liability rather than a proprietary element and should be recorded and reported as such. On the other hand, if the charge has the effect of a special assignment of net income to a proprietor the credit to the partner appears to belong to the category of proprietary equity. The status of accrued partners' salaries from a legal standpoint depends upon the specific conditions.

In the income statement it is advisable to segregate, under appropriate caption, salary allowances to partners, and there is something to be said for a preliminary showing of net, before any deductions

in favor of members of the firm are recognized. In the position statement, similarly, all amounts "due" partners should be clearly distinguished from the claims of outside creditors.

Personal Services and Income-Sharing Ratios. A salary allowance as a means of adjusting unequal personal contributions by the partners has the disadvantage of being somewhat inelastic in relation to fluctuating earnings. Thus if it is agreed when the firm is launched that a particular partner is to have a salary of $5,000 per year the effect may be to place an unreasonable burden on the enterprise in bad years, and circumstances may develop, indeed, under which it will be quite impossible to meet the salary obligation. In some measure the difficulty can be met by determining the amount of the salary by special agreement at the beginning of each year, but even this method may not be fully satisfactory in cases where operating results are highly uncertain. For some cases, accordingly, there is something to be said for a plan which makes the compensation of the partner for services furnished contingent upon the amount of income, period by period.

For example, if M and R make equal investments but M is expected to furnish the major part of the necessary managerial services the articles might provide that M receive three-quarters and R one-quarter of earnings after all charges have been taken into account other than distributions to partners. Or, better, the articles may provide for a modification of income-sharing ratios from year to year, by special annual agreements, in accord with the conditions obtaining.

Under a compromise plan the income-sharing ratios as such are not disturbed but all or a part of the "salary" allowed to the particular partner is determined at the end of the year in the form of a percentage of income realized, after all deductions other than distributions to partners have been accounted for.

Income Apportionment—Effect of Drawings. The simplest situation is that of the firm with two equal partners, who have maintained their capital accounts without change throughout the period under consideration. Assume, for example, that M and R started a partnership at the beginning of the year, each contributing $25,000, that there have been no drawings and no additional investments, and that the net proprietary income for the year is $5,000. The following entries are necessary to close the income account:

Income	$5,000	
M, Current		$2,500
R, Current		2,500

If, now, each partner draws in cash the amount of income assigned to him the partners' equities remain unchanged at $25,000 each.

Conditions of this kind, however, are rare. Usually the partners find it desirable to draw funds from time to time during the year and this gives rise to the problem of controlling such drawings and of making proper allowance therefor in the distribution of income. A number of types of agreement are possible. The articles may state, for example, that no partner shall be allowed to draw in excess of the amount of net earnings which has been determined and credited to his account except with the express consent of his fellow partner or partners, and that any excess drawings agreed upon shall be treated as loans bearing interest at a specified rate. Or it may be agreed that during each week or month each partner may draw up to a stated maximum amount—based, perhaps, upon an estimated average income—in excess of the amount of earnings which has been credited to him, and that such drawings shall have no effect upon the apportionment of income. Or the agreement may provide that in the event a particular partner's average net book equity for any period falls below his fixed capital contribution his percentage share of net earnings shall be appropriately adjusted. And so on. In no event should drawings be permitted that will impair working capital and thus jeopardize the position of the enterprise.

Drawings made in anticipation of income that fails to materialize should in general be made good by the partner, and this point may well be covered explicitly in the agreement.

Adjustment for Drawings Illustrated. For example, assume that M and R form a partnership as of January 1, each contributing $25,000 in cash. The articles provide that profits shall be shared equally but that at the end of each year the current account of each partner shall be charged, and the account of the other partner credited, with interest at the rate of 6% per annum on one-half of all drawings in excess of the net amount of income credits to such account, for the period of the deficiency. During the first year of operation the books are closed quarterly, and the record of earnings is a loss of $1,000 for the first quarter and profits for the three remaining quarters of $1,500, $2,500, and $1,800, respectively. The drawings for the year are as follows:

M		R	
April 1	$ 500	May 1	$ 200
June 30	1,000	September 30	800
October 15	500	December 15	1,200
December 1	300		

Under these conditions M's current account shows a debit balance in excess of drawings until June 30, and a debit balance of $1,250 from June 30 to September 30, when the account is just balanced by the income credit. Similarly R's current account shows a debit balance in excess of drawings to June 30, and a credit balance thereafter until December 15, when a deficiency of $700 arises. The computation of interest charges, therefore, is as follows:

M's Account

On $250 (one-half of $500) for 3 months (April 1 to June 30)	$3.75
On $625 (one-half of $1,250) for 3 months (June 30 to September 30)	9.37
On $250 (one-half of $500) for 2½ months (October 15 to December 31)	3.13
On $150 (one-half of $300) for 1 month (December 1 to December 31)	.75
	$17.00

R's Account

On $100 (one-half of $200) for 2 months (May 1 to June 30)	$1.00
On $350 (one-half of $700) for ½ month (December 15 to December 31)	.87
	$1.87

The year-end entries covering the adjustment on account of drawings are:

(1)

M, Current	$17.00	
R, Current		$17.00

(2)

R, Current	1.87	
M, Current		1.87

A net charge to M and credit to R of $15.13, evidently, would have the same effect.

Charging each partner's account in the example given with interest on one-half his excess drawings is equivalent to charging him with interest on the portion taken from the capital of the other partner. The same final result would be obtained by charging each partner with interest on the full amount of excess drawings, and crediting income. Thus if the current accounts of M and R were charged with $34.00 and $3.75, respectively, and the total adjustment of

$37.75 were treated as interest earned, the share of each in such income would be $18.87, and the net effect upon M's account would be a charge of $15.13, and upon R's account a credit of $15.13.

Stated in terms of effect upon the distribution of the year's income of $4,800 the net adjustment of $15.13 on account of drawings reduces M's share from $2,400 to $2,384.87 and increases R's share to $2,415.13.

To illustrate another method of adjustment assume all conditions as before except that the agreement between M and R deals with the question of drawings by providing that where a partner's average net book equity for the year falls below $25,000 his percentage share in annual net income shall be reduced to a fraction of which his average net equity is the numerator and the sum of such average equity and the original capital contribution of the other partner or the average net equity of the other partner for the year, whichever is the lower, is the denominator. This arrangement has the effect of penalizing a partner for drawings which result in reducing capital below the fixed amount without giving him any advantage for leaving available income in the business. The required average equities on the basis of recorded entries—taking into account both drawings and quarterly closings of the income account—can be approximated in terms of monthly units as follows:

M				R			
25,000 × 3	=	75,000		25,000 × 3	=	75,000
24,000 × 3	=	72,000		24,500 × 1	=	24,500
23,750 × 3	=	71,250		24,300 × 2	=	48,600
25,000 × ½	=	12,500		25,050 × 3	=	75,150
24,500 × 1½	=	36,750		25,500 × 2½	=	63,750
24,200 × 1	=	24,200		24,300 × ½	=	12,150
12		291,700		12		299,150

Dividing, M's average capital is found to be $24,308.33, while R's average is found to be $24,929.17—both figures less than the required amount of $25,000. M's share of the net income of $4,800 is therefore 2430833/4923750, or $2,369.74, and R's share is 2492917/4923750, or $2,430.26.

Income Apportionment—Effect of Income Balances. Should the distribution of income be affected by the fact that a particular partner fails to draw the full amount of income assigned to his account? Assuming that the funds involved can be used to advantage in the business an affirmative answer is indicated. On the other hand if the

partner leaves a portion of the earnings in the firm to suit his own convenience and the funds are not needed by the enterprise, there is no basis for increasing the extent of his participation in subsequent profits.

One method of recognizing the effect of income balances is to treat such amounts as "loans" to the firm. For example, M and R, equal partners, have made a profit in their first year of operation of $5,000, and the amounts drawn during the year are $2,000 and $1,000, respectively, which leaves an income balance of $500 in M's account and $1,500 in R's. In the next year there are no drawings and net income for the period is $3,000. The articles provide that at the close of the annual accounting period each partner shall be credited with interest on undrawn income from preceding periods at the rate of 6% per annum, as a preliminary step in income distribution. The income of $3,000 is accordingly divided as shown by the following:

(1)

Income	$ 120	
M, Current		$ 30
R, Current		90
To credit partners' current accounts with interest at 6% for one year on income balances of $500 and $1,500, respectively		

(2)

Income	2,880	
M, Current		1,440
R, Current		1,440
To apportion balance of income equally		

In a situation in which earnings were not sufficient to cover interest allowances on income balances it would of course be impossible to treat such allowances as a preliminary distribution of income. The spirit if not the letter of the agreement might still be carried out, however, by crediting each partner with interest on one-half his income balance, the other partner's account being concurrently charged. In the example given this would mean crediting M with $15 and R with $45 and charging M with $45 and R with $15—which boils down to a net charge to M of $30 and a corresponding credit to R. See preceding discussion of similar adjustment on account of excess drawings.

Perhaps the most equitable way, in general, to recognize in income distribution the effect of fluctuations in the net investment of the

partner, up or down, is to apportion income in terms of relative average net investments for the period under consideration. Thus if M's average commitment of funds for a year is $24,000 and R's is $26,000, it would seem to be appropriate to apportion the profits in terms of the ratios 24/50 and 26/50. Aside from the trouble of defining and computing averages, however, such a method of division raises a question as to the significance of drawings and income balances in relation to the firm's working capital and tends to obliterate the useful distinction between capital and current accounts.

Where a joint decision has been made to retain an income balance permanently or for a considerable period as business capital, the partner's current account should be charged and his capital account credited in appropriate amount, and the addition to capital should thereafter be taken into consideration in the apportionment of income. If provision for such a contingency is not included in the original articles an amendment or supplementary agreement is in order.

Treatment of Losses. Losses are usually borne in the same ratios as profits are shared, and like profits should be regularly closed to the partners' accounts. Losses may be recorded temporarily in the current accounts, as offsets to capital, but unless they are absorbed shortly by income credits they may as well be deducted from the capital balances.

Occasionally the agreement provides for loss-bearing ratios which are not the same as the profit-sharing percentages. M and R, for example, form a partnership, each investing $25,000. In part as a recognition of special services furnished by M the profits are to be shared on a 60–40 basis, while losses are to be borne equally. In the first period of operation the firm suffers a loss of $2,000. The entries apportioning this loss are:

M, Current (or M, Capital)	$1,000	
R, Current (or R, Capital)	1,000	
Income		$2,000

The following period the firm makes a profit of $3,000. The apportioning entries are:

Income	$3,000	
M, Current		$1,800
R, Current		1,200

Such arrangements, unless carefully covered in the agreement, are likely to lead to disputes. Assume, for example, that M and R suffer a loss of $500 in the first quarter, a profit of $1,000 and $2,000, respectively, in the second and third quarters, and a loss of $700 in the fourth quarter of a particular year. If the results of each quarter are separately apportioned the figures are as follows:

	M		R	
	Loss	Profit	Loss	Profit
First quarter	$250		$250	
Second quarter		$ 600		$ 400
Third quarter		1,200		800
Fourth quarter	350		350	
	$600	$1,800	$600	$1,200

If the entire year is taken as the period of determination, on the other hand, M is credited with 60%, or $1,080, and R with 40%, or $720, of the year's net income of $1,800. The agreement, evidently, should clearly indicate the period in which income or loss is to be reckoned.

A question may also arise as to the treatment of special gains and losses resulting from particular transactions not included in the scope of ordinary operations. Suppose, for example, that M and R sell a piece of land at a loss of $2,000, although the operating net profit for the period in which the sale occurs is $4,000. Should the special loss be divided 50–50 and the operating net 60–40? There is no satisfactory answer except that which may be provided for by explicit agreement between the partners.

Loans to Partners. Aside from indirect borrowing in the form of drawings a partner may borrow explicitly from the firm, giving his note for a definite term for the amount of the loan. How should such a transaction be interpreted? Since the firm does not constitue a distinct entity apart from the partners themselves it might be argued that a loan to a partner is merely one form of drawing, and that the indebtedness of the partner should be viewed as an offset to firm capital rather than as a genuine asset. This position is especially reasonable when considered from the creditors' standpoint. To the creditor a loan from the firm to a particular partner results, at least for the time being, in a reduction in effective business assets; and if the funds borrowed are not invested in realizable (and legally available) assets the net result of the transaction is a decrease in the total

resources upon which the security of creditors' claims rest. Viewing the partnership as a business enterprise, on the other hand, it may be urged that the indebtedness of the individual partner represents a sound, collectible receivable and therefore a good asset. It may be held, in other words, that the partner in his individual capacity is quite distinct from the group of partners as a firm, and that a transaction between the partner as an individual and the organized partnership should be accounted for substantially like transactions between any outside party and the firm. No doubt the practical significance of loans to partners varies with the circumstances. A relatively small loan for a short period may well be treated as a receivable; a large and increasing "loan" to a partner with a controlling interest may amount to a permanent contraction of firm capital. In any event the special character of loans to firm members should be indicated by setting such receivables up under special headings, in the ledger as well as in the statements.

For an example assume that M, an equal partner with R, is loaned $5,000 from firm funds for six months on his 6% note, and that at maturity the note is collected in full with interest. The entries—assuming no interim interest accrual—are:

(1)

M—Note Receivable	$5,000	
Bank		$5,000
To record loan to M (details)		

(2)

Cash	5,150	
M—Note Receivable		5,000
Interest Revenue		150
To record collection of M's note (details)		

Does the interest credit represent a true earning? An affirmative answer is not unreasonable. From the standpoint of the partnership as a whole an item of income has been realized. From the point of view of M, the borrowing partner, however, the payment of $150 over the amount drawn from joint funds represents a return of $75 to R as interest for six months on his equity in the borrowed capital plus a deposit of the same amount for the purpose of maintaining M's equity at the same level as R's.

To vary the illustration assume that at the due date M finds himself short of funds and it is agreed that the note may be renewed for another period of six months and that M's current account shall

be charged with the amount of interest. The conventional entries are:

M, Current	$150	
Interest Revenue		$150

What is the significance of the interest credit in this case? It is hardly true income, as there has been no increase in total assets or in total proprietorship. The transaction simmers down to a decrease in M's net equity and a corresponding increase in R's equity. This would be apparent if the supposed revenue were immediately apportioned between the two partners, as follows:

Interest Revenue	$150	
M, Current		$ 75
R, Current		75

The result, evidently, is a net charge to M and a net credit to R of $75.

Sales to Partners. Sales to members of the firm, like loans to partners, raise a question of interpretation. If the partner is treated as a genuine outsider with respect to price and other terms the reasonable procedure is to credit sales and charge either the partner's current account or—better—a special account to be handled like other receivables. If, on the other hand, the partner is permitted to withdraw merchandise at cost against the credit balance in his current account the transaction is in a class with the drawing of cash and has nothing to do with revenue. In general the partnership agreement should provide for the first treatment, as this is more acceptable from the standpoint of departmental accounting, is more convenient as a matter of bookkeeping routine, and is the only way in which equity can be maintained between partners buying different amounts.

Where sales to partners are large attention should be called to this condition in the periodic reports. There is always a possibility in such cases that the terms are not on an ordinary commercial basis, and that as a result revenues are being overstated or understated. From the standpoint of operating success and financial standing, moreover, sales to members of the organization do not have the significance of transactions with outsiders. This is particularly true when the transaction is considered from the point of view of the partner to whom the sale is made.

Similar questions arise, it may be added, in the handling of purchases of goods or services from one or more partners.

Questions

1. Describe the partnership. What are its principal advantages and disadvantages as compared with the corporate form of organization?

2. Name eight matters which should be covered by the contract between partners.

3. Discuss the use of partners' capital and current accounts. Under what circumstances may a third type of account be required?

4. Give illustrative opening entries: (a) for firm representing a new enterprise; (b) for firm based on an existing concern or concerns.

5. Illustrate a situation in which capital contributions are irregular.

6. Why are salary allowances for the partners sometimes desirable? Illustrate.

7. How should salary allowances be accounted for? Discuss the alternative interpretations from the standpoint of income statement and position statement.

8. What is the objection to the setting of a fixed salary for one or more partners in the articles?

9. With illustrative entries present what you deem to be a model plan of dealing with the effect of drawings and accumulated earnings upon income distribution.

10. What special problems arise where loss-sharing ratios are not identical with profit-sharing percentages?

11. Indicate the principal interpretations of loans to partners and interest on such loans. Can an enterprise realize income from a transaction which does not affect total asset values or total proprietorship?

12. How should sales to partners be accounted for? Purchases of property or services from partners?

XXXIV

PARTNERSHIP ACCOUNTS—Continued

Admission of New Partner–Investment in Excess of Book Value. Where one or more new partners is admitted to the firm–for the purpose of expanding the business or for other reasons–the old firm, from a strict common-law standpoint, goes out of existence and a new concern takes its place. In accounting for such a reorganization, accordingly, there is some excuse for using an entirely new set of records, with opening entries covering all assets acquired, liabilities assumed, and the several proprietary investments. As a practical matter, however, it is often expedient to assume continuity of the enterprise and make such entries in the existing records as are needed to recognize the new conditions.

In the admission of a new partner a problem of revaluation of assets and partners' accounts is likely to arise in view of the fact that the amount of the new member's investment, in cash or equivalent, is often not in accord with existing book values. If the firm has been unusually successful, or if particular assets have appreciated, the newcomer will presumably be required to make an investment large enough to cover his share in the unusual opportunities or enhanced values. And if the partnership has not been particularly successful, or if there is some question as to the validity of particular assets as recorded, the incoming member cannot be expected to make his deposit except on the basis of a downward revision.

The M R Co., to illustrate, finds that additional funds are needed to take care of increasing volume of business and an arrangement is made to take in T as an equal partner. At the date of reorganization the books of the firm show the following status:

Dr.		Cr.	
Cash	$ 5,000	Liabilities	$ 20,000
Other Assets	95,000	M, Capital	40,000
		R, Capital	40,000
	$100,000		$100,000

It is agreed that the assets as recorded represent sound values but that in view of the established earning power of the business T must make an investment of $50,000 to secure a one-third interest. This is equivalent to placing a value of $20,000 on the goodwill (or other intangibles) of the old firm, and the question arises as to how T's admission shall be recorded under these circumstances. If the goodwill is recognized—the treatment which accords with the valuation T is in effect placing on the business—the following entries are in order:

(1)

Goodwill	$20,000	
M, Capital		$10,000
R, Capital		10,000
To set up goodwill and adjust accounts of M and R accordingly		

(2)

Cash	50,000	
T, Capital		50,000
To record T's investment		

A possible objection to this treatment is that it involves an expansion of assets and equities not realized by actual sale, and from the point of view of M and R in particular it may seem to be unnecessary to revise recorded values in this fashion. The appropriate entries if the intangible values are not recognized are:

Cash	$50,000.00	
M, Capital		$ 3,333.33
R, Capital		3,333.33
T, Capital		43,333.34

This scheme of entries assumes that with all three equal partners it would not be reasonable to credit T with $50,000 and permit the accounts of M and R to remain at the old level of $40,000 each.

On the whole the first treatment is much to be preferred. T's entry to the firm is a transaction closely allied to the transfer of the entire business to a new organization, and justifies the recognition of

market values. Further, it would be rather ridiculous to adopt a procedure resulting in a credit to the new partner's account of substantially less than the amount of cash actually contributed.

Were T required to pay an additional amount to cover an upward adjustment of the values of particular assets the entries recognizing his admission would be similar to those shown above except that debits to the particular assets affected would be substituted for the charge to goodwill. In some situations, of course, adjustment of specific asset accounts as well as the recognition of intangible values may be required.

Admission of Partner—Investment of Less than Book Value. Assume conditions as before except that the earning record of the M R Co. has not been satisfactory and that T pays only $35,000 for a third interest. The indicated value of the enterprise under these conditions, including T's investment, is $125,000 (three times $35,000 plus the liabilities of $20,000), and the value of the total proprietary equity is $105,000. How shall T's admission be recorded? If the price paid by T signifies that the particular assets of the enterprise, in view of the circumstances, require scaling down the following entries are appropriate:

(1)

M, Capital	$ 5,000	
R, Capital	5,000	
Assets (specific accounts)		$10,000
To record revision of asset values and resulting adjustment of accounts of M and R		

(2)

Cash	35,000	
T, Capital.		35,000
To record T's investment		

It is of course necessary, under these conditions, to assign the reduction to the specific assets which it is considered should be written down.

Assuming that there is no apparent overvaluation in existing firm assets taken individually and that M and R are admitting T as an equal partner on account of the acute need of the business for working capital and the difficulty of raising the necessary sum under more favorable conditions, T's entry might be recorded without revision of assets, the partners' accounts being equalized at the expense of M and R, as follows:

(1)

Cash	$35,000.00	
T, Capital		$35,000.00
To record T's investment		

(2)

M, Capital	1,666.67	
R, Capital	1,666.67	
T, Capital		3,333.34
To equalize partners' accounts		

A more logical alternative, to reflect the excess of book values over value as a going concern, would be to reduce the recorded capitals of M and R by $5,000 each and credit $10,000 to a special account to be treated as a contra to the total book value of the assets.

A variation of this case should be considered. The assets of the partnership may be in no sense overvalued, the earning power may be adequate, and the agreement with T may recognize special contributions his advent is expected to bring to the business in the form of clientele, technical knowledge, or other factors. The appropriate entries under these assumptions are:

Cash	$35,000	
Intangibles (more exact title if possible)	5,000	
T, Capital		$40,000
To record T's investment and value placed upon intangible factors contributed		

Investment of New Capital by Present Partner. Where additional capital is contributed by a partner questions of valuation arise similar to those just discussed. If M and R, for example, are equal partners with investments of $40,000 each and M invests $50,000 of new money, thereby acquiring a two-thirds share, the principal alternative treatments are those of recognizing an intangible value (or enhancement of ordinary assets) of $20,000 or of adjusting equity accounts to the basis of $43,333.33 for a third interest, just as in the case of the admission of a new equal partner who invests $50,000.

Similarly, if M invests $35,000 in additional funds, thereby securing a two-thirds interest, it is necessary either to scale down existing asset values or to reapportion the total proprietary equity, assets remaining unchanged.

Retirement of Partner. For any of various reasons a particular partner may decide to sell all or part of his share, and in this event he may be "bought out" by the one or more remaining partners or he

may dispose of his equity to an outsider. Assume, for example, that M, R and T are equal partners with a status as shown by the following:

Dr.		Cr.	
Assets	$100,000	Liabilities	$ 10,000
		M, Capital	30,000
		R, Capital	30,000
		T, Capital	30,000
	$100,000		$100,000

At this point T agrees to sell his share to M and R for $25,000, cash, the payment to be borne equally by M and R and to be made from their outside resources. This transaction may be interpreted, from the standpoint of the firm's accounts, as merely an exchange of equities; the assets are not disturbed and T's share is absorbed by M and R at book value. The required entries under this interpretation are:

T, Capital	$30,000	
M, Capital		$15,000
R, Capital		15,000

It may be urged, however, that since the payment to T in effect sets a value of but $25,000 on a third interest, or $75,000 for the entire proprietary equity, the accounts of M and R should be revised on this basis, with an appropriate scaling down of assets. The entries according to this view are:

(1)

M, Capital	$ 5,000	
R, Capital	5,000	
T, Capital	5,000	
Assets (specific accounts if practicable)		$15,000
To adjust capital accounts and assets to new basis		

(2)

T, Capital	25,000	
M, Capital		12,500
R, Capital		12,500
To record purchase of T's share by M and R		

If T's withdrawal is financed through a payment out of firm funds (assuming that sufficient cash is available), with other conditions as before, one treatment results in the showing of an equity adjustment of $5,000 in favor of M and R, thus:

T, Capital	$30,000	
Bank		$25,000
M, Capital		2,500
R, Capital		2,500

However, this treatment implies that T receives less than the fair value of his interest—a somewhat unreasonable assumption. If each partner's share has a sound value of only $25,000 the assets might well be written down by the amount of $15,000 prior to the retirement of T's share, as in the case where M and R acquire T's share with outside funds.

To vary the example assume that each partner's account before the retirement of T's equity stands at $20,000 and that the price paid by M and R, from outside assets, is again $25,000. The first treatment gives entries as follows:

T, Capital	$20,000	
M, Capital		$10,000
R, Capital		10,000

The entries under the revaluation method are:

(1)

Goodwill (or other assets)	$15,000	
M, Capital		$ 5,000
R, Capital		5,000
T, Capital		5,000

(2)

T, Capital	25,000	
M, Capital		12,500
R, Capital		12,500

If T is retired by a payment of $25,000 from the firm's cash, other conditions remaining the same, the entries under the first plan are:

T, Capital	$20,000	
M, Capital	2,500	
R, Capital	2,500	
Bank		$25,000

The alternative treatment gives the following:

(1)
(as above)

(2)

T, Capital	$25,000	
Bank		$25,000

In the event that a partner, with the consent of his associates, sells his interest to an outsider, the problem of recording the retirement of the old partner and the advent of the new is substantially the same as in the examples already considered. There is even more justification for a revision of values in this case, however, as the price paid for the retiring member's share provides a measure of the value of the enterprise by the new partner.

The entries required to cover the retirement of a portion of a partner's equity should follow the same pattern as those which would be made upon the complete withdrawal of a partner, except that in the case of a minor change there is less excuse for a complete revaluation of the firm.

Transfer of Firm Assets and Liabilities to Corporation. The business of a partnership may be disposed of under a variety of circumstances, but perhaps the most important type of case is that of transfer to a corporation. For an example assume that the ledger of M & R, unincorporated, stands as follows:

Assets		*Equities*	
Cash	$ 10,000	Accounts Payable	$ 25,000
Accounts Receivable	30,000	M, Capital	37,500
Merchandise	50,000	R, Capital	37,500
Prepayments	2,000		
Equipment	8,000		
	$100,000		$100,000

At this point plans are made to expand the business under the corporate form and for this purpose the M R Co. is organized with a capital stock of 2,000 shares with a par value of $100 each. A contract is now entered into between the partners and the new company which calls for the transfer of all the assets of the firm to the M R Co., at an estimated fair market value of $130,000, the assumption of firm liabilities by the Company, and the delivery to the partners, as partners, of 1,050 shares of the Company's stock. Breaking the transaction up into three principal steps the following entries show the form of record required on the partnership books:

(1)

M R Co.	$100,000	
Assets (specific accounts)		$100,000
To record transfer of title to firm assets to M R Co.		

(2)

Accounts Payable	25,000	
M R Co.		25,000
To record assumption of firm liabilities by M R Co.		

(3)

M R Co. Stock	105,000	
M R Co.		75,000
M, Capital		15,000
R, Capital		15,000
To record receipt of 1,050 shares of M R Co. stock and adjustment of partners' equities to basis of market value of assets transferred		

If the stock were registered on the Company's books to the partners individually, 525 shares to each, the following additional entries, completing the closing of the firm's books, would be appropriate.

M, Capital	$ 52,500	
R, Capital	52,500	
M R Co. Stock		$105,000
To record delivery of stock to M and R, 525 shares each		

Assuming that the properties are transferred, the liabilities assigned, and the stock delivered—all necessary deeds and other papers being executed on a single day—the entries as given might be somewhat condensed, particularly through the elimination of the temporary M R Co. account.

There might be a preliminary revaluation of assets on the firm's books but this would not be necessary. On the M R Co.'s books, however, the present values should be recognized. From the standpoint of the corporation M and R are investors who are contributing assets with a value of $130,000, and equitable treatment of these investors as compared with other stockholders requires that the full value of the assets they furnish be recognized. For management purposes, too, the corporate accounts should be charged with the actual values of all assets acquired. It should be noted that the transaction between corporation and firm, with the partners dominating both organizations, does not represent arm's-length bargaining between independent parties, and the figures agreed upon in such circumstances might not be dependable evidences of market value. If all—or a substantial block—of the remaining shares were issued at this time for cash at $100 per share to other parties such action would provide acceptable evidence of the validity of the values established for the partnership assets.

Liquidation of Partnership. In addition to transfer of the business as a going concern, a partnership may be liquidated by disposal of assets in total or individually and distribution of the proceeds. The occasion may be the death of one or more partners, bankruptcy, or decision of the partners to terminate the enterprise for any proper reason. Whatever the cause it is important that in a liquidation the proceeds be applied in proper order to satisfaction of creditors, reimbursement of advances made by partners, and return of capital contributions. It is also important that distributions to partners be correctly apportioned between capital and income, especially where profits are not shared in proportion to investments.

For an example assume that the M R T Co. has been operating unsuccessfully for a number of years and that although the firm is not insolvent it is decided to liquidate. The ledger of the firm at this point stands as follows:

Dr.		Cr.	
Cash	$ 5,000	Liabilities	$ 60,000
Other Current Assets	40,000	M, Capital	30,000
Fixed Assets	75,000	R, Capital	15,000
		T, Capital	15,000
	$120,000		$120,000

With no change in liabilities in the process the assets are converted into cash, a net amount of $85,000 being realized. The liquidation loss is then $35,000, and after payment of the liabilities only $25,000 is available for distribution to the partners. Assuming the agreement provides that M, R, and T share profits and losses 50%, 25%, and 25%, respectively, the first step in liquidating the partners' equities is the assignment of the loss, as follows:

M, Capital	$17,500	
R, Capital	8,750	
T, Capital	8,750	
Liquidation Loss		$35,000

The entries recording the distribution to the partners of the balance of the proceeds are:

M, Capital	$12,500	
R, Capital	6,250	
T, Capital	6,250	
Cash		$25,000

The agreement might provide for absorption of liquidation losses on a different basis than that applicable to operating loss or gain.

In the case of an insolvent partnership the liquidation of firm assets is usually accomplished through bankruptcy proceedings or other special legal process, the results of which should be reflected on the firm's books. In the typical insolvency the proceeds from the sale of the business assets are insufficient to meet the claims of the creditors, to say nothing of payments to the partners. From the standpoint of the creditors, in particular, a complete report of the financial status of the insolvent concern should include schedules showing the estimated realizable values of the personal property of the partners to the extent that such property is legally available for the satisfaction of firm debts.

Liquidation through Operation. A partnership, like any other type of organization, may be liquidated, in whole or in part, through the utilization of its assets, without replacement, in operation. For example, M and R form a partnership to exploit a tract of timber, the amounts invested being \$60,000 and \$40,000, respectively. The agreement provides that losses and capital distributions are to be shared on a 60–40 basis but that profits are to be shared equally. It also provides for the termination of the firm when the timber has been cut and marketed, which will require, it is estimated, a period of five years. The books of the firm, ready to begin operations, show the following status:

Dr.		Cr.	
Cash.	\$ 5,000	Liabilities	\$ 10,000
Timber and Other Assets. .	105,000	M, Capital	60,000
		R, Capital	40,000
	\$110,000		\$110,000

The net income for the first year is \$10,000 and the estimated depletion \$20,000, and the cash position is such that the partners decide to draw the entire amount of profit and capital equal to the amount of depletion. The entries covering apportionment of income and drawings are:

(1)

Income	\$10,000	
M, Current		\$ 5,000
R, Current		5,000
To record apportionment of income, one-half to each partner		

(2)

M, Current	5,000	
R, Current	5,000	
Cash		10,000
To record drawing of amount of income		

(3)

M, Capital	12,000	
R, Capital	8,000	
Cash		20,000
To record capital distribution on 60–40 basis		

Similar entries would be made in later periods. It is very likely, of course, that the schedule for the exploitation of the property will not be adhered to precisely.

Installment Distributions to Partners. The distribution of liquidation proceeds in installments gives rise to no special problem where the amount available is sufficient to return all capital contributions, or where, in the presence of losses, the capital accounts as recorded are in proportion to loss-sharing ratios. Where, however, the balances of the partners' capital accounts at date of liquidation are not in harmony with loss-sharing ratios care must be taken to avoid making overpayments to particular partners as funds are made available after the settlement of all obligations. Assume, for example, that the M R T Co. goes into liquidation upon petition of creditors. Under the firm agreement in this case all partners share profits and losses equally but their capital accounts at the date the trustee takes charge of affairs are \$30,000, \$20,000, and \$25,000, respectively. How should the trustee distribute net proceeds of \$18,000 which become available in such form as to permit three monthly payments of \$6,000, \$3,000, and \$9,000? A convenient procedure treats each payment as the full amount to be received and any resulting deficiency in a partner's account as uncollectible. Thus, if a payment of \$6,000 to the partners represents the final result of liquidation, the loss suffered is \$69,000 (\$75,000, the sum of the three capital accounts on the eve of liquidation, less the payment of \$6,000) and applying this loss equally leaves balances as follows:

M	R	T
\$7,000	−\$3,000	\$2,000

Charging R's deficiency equally to the balances of M and T leaves \$5,500 and \$500, the required division of the first payment to M and

T. Repeating the process in connection with the second distribution gives:

	M	R	T	Total
Capital	$24,500	$20,000	$24,500	$69,000
Possible Loss	22,000	22,000	22,000	66,000
Balance	$ 2,500	−$2,000	$ 2,500	$ 3,000
R's Deficiency	1,000		1,000	
Distribution	$ 1,500		$ 1,500	$ 3,000

The division of the third payment is similarly calculated:

	M	R	T	Total
Capital	$23,000	$20,000	$23,000	$66,000
Possible Loss	19,000	19,000	19,000	57,000
Balance	$ 4,000	$ 1,000	$ 4,000	$ 9,000
Deficiency	–0–	–0–	–0–	
Distribution	$ 4,000	$ 1,000	$ 4,000	$ 9,000

At this point all three capital accounts are equal, corresponding to the sharing of profits and losses, and if there were subsequent distributions they would accordingly be divided equally between the three partners. The accuracy of this distribution may be checked by deducting the total proceeds of $18,000 from the combined capital accounts, and spreading the total loss of $57,000 equally. The resulting balances for M R and T of $11,000, $1,000, and $6,000, respectively, correspond to the division of proceeds calculated in terms of the individual payments.

If losses are shared unequally, in accordance with the explicit terms of the partnership agreement, and the balances of the capital accounts are not in proportion to the loss-sharing ratios, the procedure outlined still serves. Assuming, for example, that all conditions are as before except that the loss-sharing percentages of M, R, and T are 50, 20, and 30, respectively, the division of the first installment would be determined as follows:

	M	R	T	Total
Capital	$30,000	$20,000	$25,000	$75,000
Possible Loss	34,500	13,800	20,700	69,000
Balance	−$ 4,500	$ 6,200	$ 4,300	$ 6,000
M's Deficiency		1,800	2,700	
Distribution		$ 4,400	$ 1,600	$ 6,000

The assignment of M's deficiency is in proportion to the loss-sharing ratios of R and T viewed as surviving partners. The second installment of $3,000 would be distributed as follows:

	M	R	T	Total
Capital	$30,000	$15,600	$23,400	$69,000
Possible Loss	33,000	13,200	19,800	66,000
Balance	—$ 3,000	$ 2,400	$ 3,600	$ 3,000
M's Deficiency		1,200	1,800	
Distribution		$ 1,200	$ 1,800	$ 3,000

The following shows the division of the third installment:

	M	R	T	Total
Capital	$30,000	$14,400	$21,600	$66,000
Possible Loss	28,500	11,400	17,100	57,000
Balance	$ 1,500	$ 3,000	$ 4,500	$ 9,000
M's Deficiency	-0-	-0-	-0-	
Distribution	$ 1,500	$ 3,000	$ 4,500	$ 9,000

The three capital accounts now show balances in proportion to the loss-sharing ratios.

If there are but two partners the division of partial payments in liquidation is a relatively simple matter. For example, if M and R are partners sharing profits and losses equally but with capital balances of $30,000 and $20,000, respectively, and the firm is placed in liquidation, distributions made by the trustees are payable in full to M until his balance corresponds to R's; thereafter payments are equally divided. Assume, for example, three payments of $5,000, $2,000, and $4,000, a total of $11,000. The first two are payable in full to M and of the third M is entitled to $3,500 ($3,000 plus one-half of the balance). This division gives M $10,500 and R $500, which are the figures obtained by deducting the total loss of $39,000 equally.

Each partner is legally responsible for a deficiency in his account with respect to his fellow partners, but such deficiency, like amounts due creditors, may not be collectible.

Rights and Liabilities of Partners. In general the order of the claims to the proceeds of the assets of the firm made available by liquidation is as follows:

1. Valid claims of creditors (other than partners).
2. Advances or loans to the partnership by members of the firm.
3. Capital contributions of the partners (to the extent not previously canceled by recognized losses).
4. Accumulated income claims of partners.

The balance, if any, which is available after these claims are met is distributed to the partners in proportion to their income-sharing ratios. Such a balance would appear, of course, only where a special profit were realized in the process of liquidation. In most involuntary liquidations additional book losses are suffered.

Any amount due a partner as a salary allowance, under a definite agreement, is presumably to be construed as a liability to the partner, and to be included in the second class of claims as listed. Similarly any amount due a partner on account of the delivery of goods or other property to the firm, by bona-fide agreement, rates as a liability to a firm member.

If the partnership assets are not sufficient to meet the claims of creditors each partner is liable for a contribution to the deficiency, from his personal assets, in accordance with his loss-sharing ratio (in the absence of specific stipulations to the contrary in the partnership agreement). The amount of any loan or advance by the partner to the firm is deductible in determining the amount of the assessment on the particular partner. If a particular partner is insolvent or for any reason cannot be forced to contribute, the responsibility for his share of the deficiency rests upon the other partner or partners, in proportion to relative loss-sharing ratios. A partner who contributes more than his contractual share in a liquidation deficiency thereby secures a claim against the partner or partners who fail to make their full contributions.

Ignoring cases of contractual liens the creditors of the partnership in general have prior rights to firm assets over the personal creditors of the several partners and the personal creditors have first claims to the outside or personal resources of the partners. If there are no firm assets both classes of unsecured creditors are on the same footing with respect to the property of individual partners.

The liability of a partner to contribute personal property to liquidate firm obligations is ordinarily restricted to claims arising after his entry into the firm. An outgoing partner is in general liable for debts contracted prior to his retirement from the firm, except where specifically released by the creditors.

Illustrative Problem. The following problem, with solution, covers a number of the questions arising in the handling of partnership accounts which have been discussed in this and the preceding chapter.

Data

Allison & Bliss, architects, are equal partners. The formal accounts of the firm have been kept on a cash basis. That is, all costs (except in the case of equipment) have been treated as operating expenses as incurred and recognized revenue has been restricted to the amount of collections from clients. At the same time a memorandum file has been maintained which shows the amount of costs incurred on particular jobs, and a memorandum record has been kept of clients' accounts in terms of amounts billed and collected. On January 1, 1949, the firm's general ledger shows the following condition.

Dr.		Cr.	
Cash	$ 100	Accounts Payable	$ 500
Commerce Bank	4,000	Office Equipment—Allowance for Depreciation	700
Investments	4,000	Motor Cars—Allowance for Depreciation	600
Office Equipment—Cost	1,500	Allison, Capital	5,000
Motor Cars—Cost	1,700	Bliss, Capital	5,000
Allison, Current	700	Bliss, Current	200
	$12,000		$12,000

The memorandum records of the same date show costs incurred on jobs in process not yet covered by billings of $3,000, and balances due from clients on billings of $5,000. The figure for costs in process includes partners' salary charges as follows: Allison, $750; Bliss, $600.

At this point Bliss retires from the firm and transfers his equity—both current and capital—to Berry, the consideration being $10,200, paid by Berry to Bliss in cash. The following matters are agreed upon by Allison and the new partner: (1) depreciation of office equipment is overstated by $200; (2) office supplies on hand, to be recognized as an asset, amount to $200; (3) unexpired insurance, including employees' liability insurance, totals $100; (4) the costs incurred not covered by billings are to be recognized as an asset; (5) balances due from clients are to be recognized as an asset subject to an allowance for bad debts of 20%; (6) Allison's current balance is to be treated as a salary advance; (7) a check for $200 is to be issued from partnership funds, payable to Berry, to cover the credit balance in the current account of Bliss; (8) hereafter the amount of all billings is to be credited to revenue and all costs incurred on specific jobs are to be transferred to operating expense in terms of billings; (9) the firm name is to be Allison & Berry; (10) all profits and losses are to be shared equally except that any loss (or profit) realized on the present investments is to be borne by (or belong to) Allison exclusively; (11) partners' salaries are to be determined at the beginning of each year, and for the year 1949 Allison's salary is set at $4,800 and Berry's salary at $3,600; (12) the amount of goodwill to be booked is set at $2,500; (13) interest at 6% is to be charged to partners' current accounts on all drawings by partners in excess of recorded salary and income credits, and no such drawings are to be made except on the last

day of the month and by mutual agreement; (14) no interest is to be allowed on credit balances in partners' salary or current accounts; (15) partners' salaries are to be accrued monthly but the books are to be closed for purposes of determining profit or loss only on December 31 of each year; (16) the old books, with proper adjustments, are to be continued in use. The reorganization is immediately carried into effect as outlined.

Among the transactions and data for 1949 (including all information pertaining to the partners' accounts) are the following: (1) the investments are sold for cash at a loss of $1,000; (2) collections on customers' balances of January 1, 1949, total $3,500, and the remainder is assumed to be definitely uncollectible; (3) Allison's salary drawings are $4,100, and by special agreement he draws $100 additional at the end of each month; (4) Berry's salary drawings total $3,600; (5) total billings to customers are $20,000; (6) costs specifically assignable to 1949 billings are $15,000; (7) general costs applicable to 1949 as a whole amount to $2,500; (8) an allowance for bad debts included in 1949 billings is set up in the amount of $800; (9) aside from billings to customers the only other earnings are dividends on investments of $167 and the interest charged to Allison on account of excess drawings; (10) included in the billings is a charge to Berry of $800 at regular rates for service rendered to him in the erection of his own house, and which has not yet been collected. After closing, the firm's ledger on December 31, 1949, stands as follows:

Dr.		Cr.	
Cash	$ 100	Accounts Payable	$ 950
Commerce Bank	6,467	Allowance for Bad Debts	800
Clients' Accounts	5,750	Office Equipment—Allowance for Depreciation	650
Costs of Jobs in Process	3,200		
Office Supplies	300	Motor Cars—Allowance for Depreciation	300
Insurance	250		
Office Equipment—Cost	1,700	Allison, Capital	9,000
Motor Cars—Cost	1,600	Berry, Capital	10,000
Goodwill	2,500	Berry, Current	700
Allison, Current	533		
	$22,400		$22,400

Due to failing health Allison is forced to retire at the end of 1949. The firm is dissolved although the business is continued by Berry under his own name. Allison's equity is retired at book value as shown above, less 50% of recorded goodwill. Berry pays Allison $5,000 in cash from firm funds and gives him his (Berry's) one-year, 6% note for $2,217. Berry continues to use the books of the old firm.

Directions

(*a*) In skeleton journal form give the entries as of January 1, 1949, covering the retirement of Bliss and the admission of Berry in accordance with the conditions and agreements specified above.

(*b*) Present a position statement for the reorganized firm as of January 1, 1949.

(*c*) Give entries covering the transactions and data of 1949 in so far as all accounts with Allison and Berry are specifically affected.

(*d*) Present a condensed income statement for 1949.

(*e*) Give the entries covering Allison's withdrawal.

(*f*) Present a business position statement for Berry as of the opening of business on January 1, 1950.

Solution

(*a*)

(1)

Office Equipment—Allowance for Depreciation	$ 200	
Proprietary Adjustment		$ 200
To adjust depreciation allowance as agreed		

(2)

Office Supplies	200	
Proprietary Adjustment		200
To recognize estimated office supplies on hand as an asset		

(3)

Insurance	100	
Proprietary Adjustment		100
To recognize unexpired insurance as an asset		

(4)

Costs of Jobs in Process	3,000	
Proprietary Adjustment		3,000
To record costs of jobs in process, not covered by billings, as an asset		

(5)

Clients' Accounts	5,000	
Proprietary Adjustment		4,000
Allowance for Bad Debts		1,000
To set up controlling account in general ledger for outstanding clients' balances and an estimated allowance for bad debts		

(6)

Allison, Salary Advance	700	
Allison, Current		700
To record treatment of Allison's current balance as an advance		

(7)

Goodwill	2,500	
Proprietary Adjustment		2,500
To record value of goodwill as agreed		

(8)

Bliss, Capital	5,000	
Berry, Capital		5,000
To close the capital account of Bliss to Berry		

(9)

Bliss, Current	200	
Commerce Bank		200
To record payment to Berry covering his assumption of Bliss' current balance		

(10)

Proprietary Adjustment	10,000	
Allison, Capital		5,000
Berry, Capital		5,000
To close temporary adjustment account to capital accounts of present partners		

(*b*)

ALLISON & BERRY, ARCHITECTS

Position Statement

January 1, 1949

Assets

Current:			
Cash		$ 100	
Commerce Bank		3,800	
Investments*		4,000	
Clients' Accounts	$ 5,000		
Less Allowance for Bad Debts	1,000	4,000	
Costs of Jobs in Process**		3,000	
Office Supplies and Prepaid Insurance		300	
Salary Advance (Allison)		700	$15,900
Fixed:			
Office Equipment—Cost	$ 1,500		
Less Allowance for Depreciation	500	$ 1,000	
Motor Cars—Cost	$ 1,700		
Less Allowance for Depreciation	600	1,100	2,100
Goodwill			2,500
			$20,500

Liabilities

Accounts Payable			$ 500

Partners' Equity

Allison, Capital	$10,000		
Berry, Capital	10,000		20,000
			$20,500

* The partnership agreement provides that any loss suffered or profit realized through the disposition of these investments shall accrue solely to Allison.

** Includes charges for partners' services in the amount of $1,350.

(*c*)

(1)

Allison, Capital	$ 1,000	
Cash	3,000	
Investments		$4,000
To record liquidation of investments and charging of loss of $1,000 to Allison		

(2)

Operating Accounts (specific accounts affected)	8,400	
Allison, Salary		4,800
Berry, Salary		3,600
To record, in summary, monthly salary accruals		

(3)

Allison, Salary	4,800	
Berry, Salary	3,600	
Allison, Salary Advance		700
Commerce Bank		7,700
To record, in summary, payment of salaries to partners, including absorption of advance to Allison		

(4)

Allison, Current	1,200	
Commerce Bank		1,200
To record special drawings by Allison		

(5)

Allison, Current	33	
Interest Income		33
To charge Allison and credit income for interest on excess drawings per agreement		

(6)

Clients' Accounts (also Berry)	800	
Billings		800
To record work billed to Berry		

(7)

Income	1,400	
Allison, Current		700
Berry, Current		700
To record apportionment of net profit		

(*d*)

ALLISON & BERRY, ARCHITECTS

Income Statement

Year Ended December 31, 1949

Billings to Clients (1)	$20,000		
Less Allowance for Bad Debts	800	$19,200	
Dividend and Interest Income (2)		200	$19,400
Expenses and Losses:			
Costs Assignable to Specific Jobs (3)		$15,000	
General Costs (3)		2,500	
Bad Debts Originating Prior to January 1, 1949		500	18,000
Earnings of Partners			$ 1,400
To Allison, Current	$ 700		
To Berry, Current	700		
	$1,400		

(1) Includes services rendered to a partner, Berry, in the amount of $800.
(2) Includes interest of $33 charged to Allison on account of excess drawings.
(3) Includes partners' salaries for the year of $8,400.

(*e*)

(1)

Allison, Capital	$9,000	
Allison, Current		$ 533
Goodwill		1,250
Commerce Bank		5,000
Notes Payable		2,217
To record Allison's withdrawal as agreed, including adjustment of goodwill		

(2)

Berry, Capital	800	
Clients' Accounts (also Berry)		800
To charge Berry's capital with amount due from Berry to Allison & Berry		

(3)

Berry, Current	700	
Berry, Capital		700
To close Berry's current balance arising during operation of Allison & Berry		

(*f*)

BERRY, ARCHITECT

Position Statement

January 1, 1950

Assets

Current:			
Cash		$ 100	
Commerce Bank		1,467	
Clients' Accounts	$4,950		
Less Allowance for Bad Debts	800	4,150	
Cost of Jobs in Process		3,200	
Office Supplies and Prepaid Insurance		550	$9,467
Fixed:			
Office Equipment—Cost	$1,700		
Less Allowance for Depreciation	650	$1,050	
Motor Cars—Cost	$1,600		
Less Allowance for Depreciation	300	1,300	2,350
Goodwill			1,250
			$13,067

Liabilities

Accounts Payable	$ 950	
Notes Payable	2,217	$ 3,167

Proprietor's Equity

Berry, Capital	9,900
	$13,067

Comments

(a)

The use of a special clearing account might be dispensed with, particularly if the entries given were consolidated. For illustrative purposes a detailed scheme of entries is preferable. The use of the "salary advance" account is desirable, and in any event the item must be clearly labeled in the position statement and shown on the asset side.

It is noticeable that no allowance is made to cover the possibility that charges to

clients which may later be made on the basis of costs now in process may not be fully collectible.

Continuing the existing accounts, including costs of fixed assets and accrued depreciation, is not objectionable in such a situation provided all necessary adjustments are made. An alternative procedure would be to show net present values of all assets in the accounts of the reorganized firm.

(b)

The general form of statement used here is particularly appropriate for the unincorporated enterprise.

From the standpoint of the firm the charges for partners' services included in cost of jobs in process may be deemed a valid asset; from the standpoint of each individual partner, on the other hand, treatment of the unrealized cost of his own services as an asset may appear to be questionable. In any event an explanatory note is advisable.

(c)

The loss on investments is charged to Allison's capital account rather than to his current account as the item has no bearing on the activities of the firm. Were the firm to continue in business Allison would be expected to make good this amount. With respect to salary accruals an alternative procedure would be to credit the current accounts in lieu of special salary accounts. The charge to Allison for interest may be computed on each monthly drawing. Thus interest on \$100 for eleven months at 6% is \$5.50; interest on \$100 for ten months is \$5.00; and so on. Or the amount may be found—in view of the regularity of the drawings—by applying the rate of 6% for the maximum period, eleven months, to one-half the total amount drawn, \$600, which gives \$33.

It is assumed that the balances of accounts of clients written off in excess of the allowance have been charged to a special loss account rather than directly to the partners' accounts.

(d)

The use of the term "billings" as a label for gross revenue is not inappropriate here. In view of the limited data available the operating charges must be presented in very condensed form. The assumption that all of partners' salaries for year are applicable to current revenues is arbitrary.

(e)

With the dissolution of the firm and the transition to a single-proprietorship there is no point to the retention of the amount Berry owes Berry as an asset. The balance in Berry's current account might be allowed to stand, but since this balance originated in connection with firm activities it is advisable to merge it with the balance of Berry's capital account; in this way the break between the old concern and the new organization is emphasized.

See comment under (a) regarding possibility of showing only net present values on books of the reorganized business.

Questions

1. Illustrate the admission of a new partner to the firm: (a) with investment in excess of book value; (b) with investment below book value. Discuss the alternative treatments involved in both cases.

2. Illustrate the raising of additional firm capital by an investment by an existing partner.

3. With illustrations show how the withdrawal of a partner should be accounted for when his equity is acquired: (a) by a new partner; (b) by an existing partner; (c) from firm funds.

4. When a firm is incorporated on what basis should the assets be transferred to the corporation? Why?

5. Under what conditions may a partnership be liquidated? Give illustrative entries covering a voluntary liquidation.

6. Give illustrative entries covering partial liquidation of assets through utilization in operation, without replacement.

7. With an illustration show how distributions to partners in liquidation should be divided where loss-sharing ratios are not in harmony with the capital accounts appearing on the books.

8. Outline the ranking of claims to firm assets in liquidation. Do partnership creditors have a claim against the personal assets of partners? Discuss.

9. If asked by a trustee in charge of liquidation to prepare a statement of realizable resources in the case of an insolvent partnership, how would you proceed?

XXXV

CORPORATE CAPITAL ACCOUNTS

Organization of Corporation. The first step is that of planning the undertaking, which may consist of establishing a new business, absorbing an existing unincorporated concern, modifying and developing a preceding corporation, or merging two or more companies. Promotion in the broad sense includes fixing the amount and character of the formal capital, making arrangements for raising the necessary funds, drawing up tentative by-laws, securing options on property, etc. The second step is that of actual incorporation, taken care of by the incorporators and their advisers. Corporations usually organize under the laws of a particular state, and the details of conditions and procedure vary from state to state. Articles of incorporation must be prepared in proper form and approved by the state officials. The articles, supported by the provisions of the state law, constitute the charter of the company, giving it being and defining its powers, and with the filing of the articles the corporate existence in a legal sense may be said to begin. Under the typical statute one or more persons, natural or corporate, may act to incorporate the ordinary trading or industrial company. Among other data the articles usually state: (1) name of corporation; (2) purpose for which formed; (3) location and postoffice address of registered corporate office in the state; (4) statement of authorized stock, including number of shares, par value or in the case of no-par stock the probable issue price, facts as to preferences, and any other pertinent data; (5) names and addresses of incorporators, and number and class of shares subscribed for by each.

Often much remains to be done, following legal incorporation, before the company can begin active operation. In the case of a new business in particular it is necessary to complete the process of rais-

ing capital, acquire or construct the necessary plant facilities and other assets, organize a staff of employees, and establish contacts with customers.

Capital Stock—Par Value. Capital stock, the legal expression of the equity of the shareholders, first appears in the guise of authorized capital, expressed in number of shares and par or stated value. Stock outstanding, a more significant phase for accounting purposes, is represented by the shares which have been duly issued and remain in the hands of the corporation's members or shareholders. The difference between the total authorized stock and the amount outstanding at any time is the unissued stock. Accountants usually draw a distinction between shares which have never been issued and shares which have been "reacquired" and have been retained, without cancellation, in the company "treasury"—a distinction much less significant than is often assumed. Capital stock subscribed represents shares covered by stock subscriptions, and is a phase of capital stock midway between authorized and outstanding shares.

Par-value stock is the traditional form and is still widely employed. The design lying back of the use of par value is the creation of a definite capital fund through the contributions of stockholders for the purpose of carrying on the operations of the business and for the protection of the corporate creditors. This is reflected in those state statutes that prohibit the issue of par-value stock at a discount. The significance of par value has been minimized by the development of the practice of issuing stock for property other than cash at nominal and sometimes overstated values. Par value, moreover, even where representing the actual issue price, is not likely to be identical with the amount of stockholders' equity at a particular date following a period of operation, and hence should not be taken too seriously in the interpretation of corporate financial position.

No-Par Stock. The use of stock without par value has been widely legalized and many issues of such stock have been emitted. From the standpoint of corporate administration and accounting this development is intrinsically unobjectionable and has commendable features. Authorized capital can be conveniently dealt with in terms of number of shares without reference to dollars. Omission of dollars in no way complicates the routine handling of stockholders' accounts. Dividends can be more conveniently and significantly expressed in dollars and cents per share than as a percentage of par value. More-

over, since statutory stressing of par value has not always prevented stock-watering and the emphasis on par value in financial statements has often been more misleading than helpful, the increase in the use of stocks having no formal value can be viewed as a movement not necessarily out of line with the general desire for high standards in corporate organization and financing.

On the other hand abuses have developed with the use of stocks without par value which thus far seem to outweigh any advantages derived. This condition may be charged in part to the unsatisfactory statutes adopted by most of the states. Instead of accepting the rational view that the capital of a concern financed with no-par stock is automatically fixed by the amount actually paid in by the stockholders, in cash or equivalent, the various acts in general authorize the issuing corporation to "state" or "declare" such portion of the amount received to be capital as it desires, subject in some cases to the limitation that the credit to capital account shall not be less than a prescribed minimum value. In other words, no-par stock has become in effect an elastic "low-par" stock, with the result that corporations just beginning operations are permitted to report a portion of their initial capital as "surplus," and companies that have been in business for some time and wish to improve the showing of "surplus" are offered an easy way of reaching this goal through revision of stated value.

Both no-par and par-value stocks are sometimes represented in the capitalization of a single corporation. The most common practice in such cases is to restrict the use of par value to senior or preference issues.

Common and Preferred Stock. Most companies issue but one class of stock. Such stock, unless there is specific arrangement to the contrary, carries the right to vote at stockholders' meetings, the right to participate in all dividend appropriations, and the right to acquire a proportionate part of any new stock offering made by the company. In general each share has one vote. Stock once fully outstanding, moreover, is the unrestricted property of the stockholder and can be transferred to any other party without the consent of the corporation.

A senior stock issue is found in many corporations, and occasionally two or more classes of preferred stock are employed by a single company. There is no standard type. In general any stock to which one or more preferences or special rights attach, as compared with

the status of another class of stock emitted by the same company, is a preferred issue.

Priority with respect to dividends, at a stipulated rate, is almost universally accorded to a preferred stock. This does not mean that periodic dividends are assured; if no current or retained earnings are present dividends in general cannot legally be declared on any class of stock. Further, the directors are not bound to declare the regular preferred dividend in whole or in part even in the presence of earnings provided their best judgment indicates that there are no funds available, in view of the legitimate needs of the business, from which to make the disbursement. If the right to receive the specified annual dividend is cumulative, however, the total amount of preferred dividends in arrears at any time must be met before any dividends may be declared upon the common stock. There is also some support for the view that even where the stock is not cumulative in the strict sense the claim to dividends accumulates to the extent of applicable earnings. Occasionally preferred stock has participating rights in income. For example, an issue may have priority with respect to the amount of $6 per share and share-for-share participation with the common stock in distributions in excess of $6 per share on both classes.

Preferred stock generally ranks above common stock with respect to the distribution of the proceeds from liquidation. If the issue has a par value such value usually expresses the extent of the prior claim on assets. In the case of no-par preferred stock the amount of the equity in liquidation should be expressly stated in the agreement covering the issue. Dividends in arrears do not constitute a claim on capital in distribution unless there is provision to this effect. Participation in residual assets in accordance with participating rights in income is a possibility. Preferred stock also often has the benefit of protective clauses which restrict the management in connection with borrowing, plant expansion, common dividends, etc. Occasionally the contract provides for gradual retirement of the preferred stock through sinking-fund operations. The redemption or call price usually includes a premium. Preferred stock may have special subscription rights and conversion privileges.

The major control of corporate activity is usually vested in the common stock. This is brought about either through the issue of a smaller number of preferred shares or by restricting the voting power of the preferred. In some cases the preferred stock carries no vote;

in others preferred voting is limited to special questions or is permitted only under unusual financial conditions.

The use of special labels does not create preferences where only one class of stock is outstanding. Thus the stock of the Great Northern Railway Co. is "preferred" in name only.

Complexity of capital structure through the use of several classes of stock, with special restrictions and privileges attached, should not be encouraged. A single issue of cumulative preferred stock, with regular voting power and no fine-spun features, accompanied by a clear-cut issue of residual common stock, should satisfy all legitimate needs. It is probably true that some specialization of securities is necessary to attract the capital of investors of varying inclinations and purses, but there is reason to believe that the elaboration sometimes indulged in is not required.

Stock Certificates. Ownership of shares in a corporation is evidenced by stock certificates. These are formal documents serially numbered which show the name of the company and the state in which incorporated, the amount and character of the authorized capital, the number of shares owned, the name of the registered holder, a certifying statement of ownership with the rights and conditions accorded, date of purchase or transfer, and signatures of proper officers and transfer agent. If the stock is "fully paid and non-assessable" this fact should appear on the certificate, and if it is assessable the paid-in value should be clearly shown. The corporate seal must be affixed. Where the agreement with the stockholders contains numerous special provisions, as is often true of preferred stock, the details are printed on the reverse side and are referred to in the certifying statement on the face. On the back of the certificate is also provided a form to be used in assigning the certificate for the purpose of sale, deposit as collateral, etc.

In small corporations blank stock certificates are acquired in books of 100 sheets or more, bound in somewhat the same form as large checkbooks. Each blank certificate is attached to a stub correspondingly numbered on which all essential data are written before the certificate is detached. In the case of a transfer the information on the stub should include name of transferor and his certificate number. Canceled certificates are usually pasted to their respective stubs, which means that the open stubs should check with the amount of stock outstanding.

The rules of the New York Stock Exchange require strict supervision of the printing of certificates of listed securities. Standardized certificates are required, with distinctive colors for different classes and denominations. To be valid certificates must be countersigned by the transfer agent and registered by the registrar, both of whom must have been regularly appointed and with the approval of the listing committee of the Exchange. The transfer agent may or may not be an employee of the company, but the corporation is not permitted to act as its own registrar.

In the case of large companies, with the number of stockholders running into the thousands and numerous transfers occurring from day to day, the work of issuing and recording the original certificates and taking care of transfers is a formidable task and requires highly developed forms and procedures.

Temporary certificates are sometimes issued which are replaced when the regular forms become available. Where stock is deposited in a voting trust special trust certificates, substantially equivalent to a very formal receipt, are issued to the individual holders. Warrants and rights are evidenced by documents somewhat similar to stock certificates. A certificate for a fraction of a share does not by itself represent voting power or a right to participate in dividends.

Recording Stock Subscriptions and Issues. The M Co., for example, is organized with an authorized capital of $100,000, consisting of 10,000 shares—all of the same class—with a par value of $10 each. The incorporators, M, R, and S, subscribe for 1,000 shares each at par and at this stage articles are prepared and filed and the corporation is legally launched. The subscriptions of M, R, and S are collected in full, and the certificates are issued. Subscriptions are received from various parties for 7,000 shares at par, and are later collected in full. Certificates are issued to the appropriate parties for 7,000 shares. In condensed form, but with transactions with the incorporators segregated, the necessary entries are as follows:

(1)

Subscriptions	$30,000	
Capital Stock Subscribed		$30,000
To record subscriptions of M, R, and S for 1,000 shares each		

(2)

Cash	30,000	
Subscriptions		30,000
To record collection of subscriptions of M, R, and S		

(3)

Capital Stock Subscribed	30,000	
Capital Stock Outstanding		30,000
To record issue of certificates to M, R, and S for 1,000 shares each		

(4)

Subscriptions	70,000	
Capital Stock Subscribed.		70,000
(details)		

(5)

Cash	70,000	
Subscriptions		70,000
(details)		

(6)

Capital Stock Subscribed	70,000	
Capital Stock Outstanding		70,000
(details)		

This scheme of entries emphasizes three distinct steps as subject to record: (1) taking of the subscription; (2) collection of the subscription; (3) issue of the stock certificate. The recognition of the first step in the accounts assumes that a subscription for stock—represented by a written agreement under which the subscriber promises to invest a stated amount on a definite date or dates for a specified number of shares—constitutes a recognizable asset to the corporation. It also assumes that stock subscribed is a recognizable equity—an intermediate, temporary phase of the proprietary interest. On the basis of these assumptions the second step becomes a matter-of-fact collection of a receivable, and the entries for the third serve to close the provisional equity account and open the account with stock outstanding.

As a convenient procedure, and one useful for purposes of accounting control of subscriptions, the three-step treatment outlined has merit. Steps one and three, however, should not be overemphasized as to effects. Stock subscriptions are nothing more than promises to invest; at the most they represent capital in the process of being raised. The issue of formal certificates, moreover, is a nominal, clerical step rather than a decisive transaction; in general the subscriber becomes an actual stockholder by the act of contributing funds. The essential transaction is the acquisition of cash or other property from the investor; it is this step that brings true assets into being and gives rise to the existence of contributed capital. Accordingly the uncollected balance of subscriptions at the end of an accounting period may well be shown as a contra to capital stock sub-

scribed in the financial statement. And if the uncollected subscriptions are reported as an asset, rather than as a contra on the equity side, the amount should be clearly labeled and should not be combined with ordinary receivables.

Where there is only a very small number of subscribers the accounts covering subscriptions and capital stock may be set up in terms of the names of the particular parties, without the use of controlling accounts.

Subscription Installments and Defaults. Where stock subscriptions are taken on the installment plan the entries recording collections become correspondingly detailed. The M Co., for example, accepts subscriptions on January 15 for 1,000 shares of stock at $100 each. The subscriptions are accompanied by a down payment of 10%, and the agreement provides for payment of the balance in three equal monthly installments, the first of which is due on February 15. Assuming that subscriptions are collected in full on the due dates and that the certificates are issued on April 20, the necessary general-ledger entries are:

January 15		
Subscriptions	$100,000	
Capital Stock Subscribed		$100,000
Cash	10,000	
Subscriptions		10,000
February 15		
Cash	30,000	
Subscriptions		30,000
March 15 and April 15 (same as on February 15)		
April 20		
Capital Stock Subscribed	100,000	
Capital Stock Outstanding		100,000

In these entries the total amount subscribed is passed through the subscriptions account, although it would of course be possible to charge cash directly for the amount of the down payment.

A variation consists of opening a series of installment accounts in lieu of, or in addition to, the general subscriptions account, for the purpose of securing separate control of each installment and to emphasize amounts currently receivable, past due, etc. in making reports. However, if the underlying cards or sheets are properly ruled

all necessary data can be made readily available without elaboration of general-ledger accounts.

To illustrate the treatment of defaults assume conditions as above except that on Y's subscription for ten shares no collections are made after the down payment and the subscription is considered canceled. The entries necessary to give effect to the default and cancellation on the books are:

Capital Stock Subscribed	$1,000	
Subscriptions (and Y's account)		$900
Capital Contributed by Defaulting Subscribers		100

This assumes that the initial deposit is not recoverable by Y, an assumption that might be questioned in some circumstances from a strict legal standpoint. The Company in this situation might reasonably issue one share of stock to Y, canceling the balance of his subscription, in which case no special item of capital would emerge.

Ideally, the capital arising from forfeited deposits on subscriptions should be charged with any financing or other costs incurred applicable to the uncollectible portion of the subscriptions.

In the raising of capital from employees and customers on the installment plan, where the period involved is likely to cover a year or more, interest is sometimes charged on unpaid balances and the subscribers' accounts are credited with an amount matching the dividends declared on outstanding stock.

Treatment of Unissued Stock. Some accountants advise beginning the accounting for capital stock with recognition of capital authorized rather than capital subscribed. Applying this suggestion to the first example given above, and combining transactions with incorporators and others, results in the following skeleton entries:

(1)		
Unissued Capital Stock	$100,000	
Capital Stock Authorized		$100,000
(2)		
Subscriptions	100,000	
Capital Stock Subscribed		100,000
(3)		
Cash	100,000	
Subscriptions		100,000
(4)		
Capital Stock Subscribed	100,000	
Unissued Capital Stock		100,000

In addition entries necessary to close capital stock authorized to capital stock outstanding might be made if this were deemed desirable.

Under this procedure the initial memorandum entries are mutually offsetting, and no harm is done if this is understood. Unissued stock represents a means by which resources may be obtained but it is not a recognizable asset; to hold otherwise would be equivalent to contending that the company has as much property before the capital has been raised as it has afterward—manifestly an absurd proposition. It follows that any balance in the account with unissued stock should either be excluded from the position statement or should be reported as a contra to authorized stock. If, for example, the entire authorized stock of 10,000 shares is booked but the amount issued at the date of the first report is only 3,000 shares, the appropriate presentation is:

Capital Stock:	
Authorized—10,000 shares, par value $10 each.	$100,000
Unissued—7,000 shares	70,000
Outstanding—3,000 shares	$ 30,000

In the case of no-par stock the undesirability of recognizing unissued stock in the ledger is made quite apparent by the absence of a formal capital value.

Issue of Stock at Discount. In some jurisdictions stock may be legally issued by the corporation at a discount, and issue of stock when less than par has been paid in is usually not considered improper if it is understood that the balance will be collected later. Issuing at a discount may arise from the state of the market for funds, or it may reflect the fact that the entire amount of capital is not needed in the early stages of the venture. Mining companies have sometimes issued partly-paid stock with the expectation of calling the balance in as required for development. Certificates issued under such circumstances must show the amount paid in as well as par value. In law the stockholders are liable for the amount of actual discount and can be assessed by action of the board of directors or, in insolvency proceedings, by the court. This rule follows from the doctrine that in the case of stocks with par value the legal capital is represented by the amount of par.

A not unreasonable method of recording stock issued at a discount, and of which instances have been found in practice, consists of cred-

iting the capital stock account with the amount paid in and ignoring par. The R Co. for example, issues 1,000 shares of stock, par value $100 each, at $80 per share. The summarized entries are:

Cash	$80,000	
Capital Stock—Amount Paid In		$80,000

Later a pro-rata assessment of $10 per share is collected. The entries under this method are:

Cash	$10,000	
Capital Stock—Amount Paid In		$10,000

It is almost universal practice, however, to show par value explicitly in the accounts and where stock is emitted at a discount this requires the use of a special offsetting account. Applying this treatment to the issue of R Co. stock the entries become:

Cash	$80,000	
Capital Stock—Discount	20,000	
Capital Stock—Par		$100,000

And the amount of the assessment collected is credited to the modifying account, thus:

Cash	$10,000	
Capital Stock—Discount		$10,000

In recording subscriptions for stock at less than par the subscriber's account should be charged with the amount collectible, not par value. If desired the par value may be recognized at once in the stock subscribed account, with an accompanying offset, or the discount may be recorded when the stock is issued and the temporary equity account closed.

With respect to stock-ledger procedure it should be observed that the individual shareholder's account may very well be maintained in terms of par value, whatever the issue price, assuming that the amount of discount (or premium) is uniformly applicable.

In the position statement stock discount should be presented as a contra to par value, as shown by the following:

Capital Stock:		
Par Value	$100,000	
Less Discount	10,000	$90,000

This method of display satisfies the tradition to the effect that par value must be reported and shows clearly the actual amount paid in by the shareholders.

Improper Treatment of Discount. The mistake is sometimes made of reporting discount as a deferred charge on the asset side (or, worse, burying the amount under some definite asset caption). Stock discount is always an offset to a nominal equity value, never a true resource. To treat the item of discount as actual property is tantamount to assuming that asset values must be present in an amount sufficient to validate par—an assumption which denies the existence of discount, the phenomenon under consideration. This conclusion is not altered by the fact that discount is a type of contingent receivable. Even stock subscriptions, as noted earlier, have a somewhat dubious asset status, notwithstanding their definiteness and collectibility. Discount, like unissued stock, represents authorized capital which may never be raised, and should certainly not be viewed as a genuine asset unless and until decisive action is taken to collect.

Neither should stock discount, although a negative equity item, be construed as a loss to the issuing corporation. Issue at par may in general be preferable, but this does not mean that issue below par brings any loss of asset values. As stated above, discount is simply that portion of the nominal amount of capital represented by stock outstanding which for one reason or another has not been paid in by the stockholders (and was not included in their subscriptions); and the appearance of this element in the accounts would not be necessary if it were not considered advisable to record par value in formal fashion.

Confusion of true discount and costs incurred in raising capital is not uncommon, particularly where large blocks are issued through underwriters. Discount is the difference between par value and the actual amount contributed by the original body of stockholders; the amount paid in cash or equivalent for services rendered in the process of financing represents a genuine asset.

Disposition of Discount. Absorbing stock discount in the operating charges of later periods, a treatment which naturally follows recording discount in the first instance as a deferred charge, is a blunder. This practice pads expenses with the amount of an offset to nominal capital and thus results in the retention of earnings in the business without passing such earnings through the income account; it per-

mits revenue to be capitalized, in other words, without any acknowledgement of the process. If discount is written off the charge should be treated as an appropriation of net earnings and not as an expense or loss.

Assuming that the distinction between original investment and accumulated earnings (or deficit) is fundamental, and that stockholders and others interested have a right to be fully informed in this connection, a case can be made for the retention of the discount account on the books as a permanent part of the record of capital stock or until eliminated by assessment. This position is sometimes opposed on the ground that discount is a doubtful item, the appearance of which tends to impair the standing of the corporation, and those holding to this point of view urge that discount should be absorbed by charges to retained income just as soon as this becomes feasible. Such opinion is partly the result of the mistaken notion that discount must be reported among the assets. If discount is clearly shown on the equity side as a deduction from par in the determination of the amount paid in, the danger of misinterpretation is avoided.

The familiar view that the absorption of discount by charges to earnings will release the stockholders from the contingent liability represented by discount is not solidly founded. The courts have held again and again that a distinction must be drawn between the acts and affairs of the shareholder and the acts and affairs of the corporation in which he has an equity. It follows that the liability of the shareholder to contribute the full amount of par can be satisfied only by definite payment by the shareholder, from his own funds, of the required amount. The accumulation of earnings *by the corporation,* however booked, does not constitute a legal contribution *by the shareholder* to the corporate treasury.

Assessment Procedure. Assume, for example, that the R Co., having 10,000 shares of stock with a paid-in value of \$80,000 and a par of \$100,000, calls an assessment on stockholders of the balance of the discount, \$2 per share. Accounts showing both par and discount are on the books, and there is an accumulated deficit amounting to \$1 per share. Upon notification of stockholders, all necessary formalities having been taken care of, the outstanding discount is made collectible as of a specified date or dates and entries recognizing this condition may be recorded, as follows:

Assessments Receivable	$20,000	
Capital Stock—Discount		$20,000

Assessments receivable have about the same status as unpaid subscriptions, except that more difficulty is likely to be experienced in effecting their collection. If desired the somewhat nominal character of the absorption of discount at this point might be indicated through the use of a special account to receive the credit entry. Assuming that all assessments are paid by the stockholders as scheduled the entries summarizing collections are:

Cash	$20,000	
Assessments Receivable		$20,000

It is necessary, of course, to maintain a record with each stockholder to which is charged the amount assessed and to which the one or more amounts received are credited.

It should be noted that the calling and collecting of discount does not affect the amount of accumulated earnings or loss.

Shares on which assessments remain delinquent may by due legal process become forfeited to the company. In this event the book equity represented by the forfeited shares becomes attached to the remaining shareholders as a form of capital adjustment.

Discount on Preferred Stock. Any class of par-value stock may be issued at a discount, and the contingent liability presumably attaches exclusively to the particular class of stock through which the discount originates. It is possible, moreover, for one company to issue fully-paid common stock and preferred stock at a discount. The R Co., for example, issues 10,000 shares of common stock with a par value of $10 per share at par, and at about the same time issues 1,000 shares of preferred stock, with a par of $100, at $95 per share. In this situation the preferred stock is assessable although the common is fully paid.

The agreement with the preferred stockholders commonly provides that in the event of liquidation they shall be entitled to the par value of their holdings before any distribution may be made to the junior shareholders. Does this in any way affect the assignment of discount arising through the issue of preferred stock? A negative answer is justified, on the ground that liquidation conditions—although they should not be lost sight of—do not control the accounts and statements of the going concern. With respect to the capital

accounts of the corporation it is clearly the task of the accountant to show the amount actually paid in by each class of stockholders, even if this classification does not correspond to the distribution which would be in effect upon dissolution, and this requirement controls the presentation of par values and discounts.

The proper treatment in the position statement can be indicated as follows:

Preferred Stock (1,000 shares, par $100)		
Par Value	$100,000	
Discount	5,000	
Amount Paid In		$ 95,000
Common Stock (10,000 shares, par $10 each)		
Paid In		100,000

Premium on Stock. Although the general legal view classifies the excess over par value paid in by stockholders as "surplus" the accountant usually takes the position that stock premium represents a part of the total capital investment and should be reported as such. In particular he objects to the doctrine that premium affords a basis for dividend appropriations. It is certainly not good administration to disburse as dividends funds paid in by shareholders (except in the process of partial or complete liquidation), and such action is almost sure to be misleading to present and prospective investors.

It is a tradition in banking that stock should be issued at a substantial premium, as a means of expanding actual capital beyond the stated amount. (It would perhaps be more reasonable if the practice were to authorize a larger number of shares and issue all shares at par value.) Such premium, although generally credited to "surplus," is viewed as a part of the capital structure, not available for dividends.

Inclusion of premium in current net income, a practice not unknown, is entirely unjustified. Whatever conclusion may be reached with respect to the propriety of basing dividends on premium it should be evident that no part of the contribution of the stockholder is income.

Premiums received on more than one class of stock should not be combined in a single ledger account. As in the case of stock issued at a discount, it is advisable to show in the position statement the amount actually received for each class of stock, although there is no question of assessment here. From the standpoint of dissolution, true, premium on preferred stock may not represent an equity of the

holders of this class of stock, but this fact does not make it undesirable to show the origin of the premium.

Recording No-Par Stock. The M Co., for example, issues 1,000,000 shares of no-par common stock at a price of $15 per share. By resolution of the board of directors the stock is given a stated value of $7.50 per share, and the amount received in excess of this value is treated as paid-in "surplus." The summarized entries, according to the treatment usually recommended, are:

Cash	$15,000,000	
Capital Stock—Stated Value		$ 7,500,000
Capital "Surplus"		7,500,000

In the position statement the stock equity in this situation should be reported as follows:

Common Stock (1,000,000 shares authorized and issued):		
Stated Value	$ 7,500,000	
Capital "Surplus"	7,500,000	$15,000,000

This procedure serves to emphasize the capital character of the "surplus," and should discourage improper action in connection therewith. Unfortunately some corporations still fail clearly to distinguish capital "surplus" from retained earnings in their reports, and there have been cases in which dividend appropriations were based, directly or indirectly, upon funds represented by the contributions of stockholders. It would be helpful, as a means of discouraging misinterpretation, if accountants would insist on crediting the total amount paid in by a particular class of stockholders to a single account (in the case of par issues as well as in no-par cases), and restricting the reporting of any portion legally viewed as "surplus" to a parenthetic showing. For the example given this would result in the following treatment:

Common Stock (1,000,000 shares authorized and issued):	
Capital Contributed (of which the amount of $7,500,000 has been designated as paid-in "surplus")	$15,000,000

Where preferred stock is authorized without par value it is necessary to settle upon an amount to which each share is entitled in the event of liquidation, and use of such amount in lieu of par value in

recording the issue of the stock is a possibility. Here too, however, the most satisfactory treatment is to credit the capital stock account directly with the entire proceeds.

The stock ledger in the case of no-par stock can readily be kept in number of shares, with no value attached. It is better procedure, however, to apply the value per share appearing in the capital account in the general ledger, as this facilitates clerical control.

Issue of Stock for Property Other than Cash. In corporate organization, particularly where an existing business is acquired, blocks of stock are often issued directly for land, mineral rights, buildings and equipment, patents, and other assets. In all such situations the assets contributed by the stockholders should be recorded in the corporate accounts at their fair market values, on a cash or equivalent basis, at date of acquisition by the company, and the amount of such values should be credited to the capital stock account or accounts. If the shares issued have a par amount, and the value of the assets received is less than such nominal figure, the amount of the excess is stock discount, just as in the case of shares issued for cash at less than par; if the value of the assets received exceeds the par of the shares issued such excess represents a form of stock premium. Using the nominal amount of securities issued as a measure of the assets received—a common practice—will give proper results only where the actual value of the assets happens to coincide with par. Likewise the use of values appearing in the accounts of the party from whom the assets are acquired is objectionable except in those relatively rare cases where the old book figures happen to approximate present values. The accounts of the acquiring corporation, a distinct entity, should be charged with the present value of property acquired, not with cost or cost less depreciation to a predecessor owner. In practice, in some situations, there are varying opinions as to the cash value of the assets invested—a condition that may in part account for the tendency of the courts to hesitate to construe an alleged overvaluation as assessable discount. In dealing with cases of this type the accountant should examine the conditions carefully and should not be guided solely by the nominal terms of the transaction. Indirect evidence of actual property values is sometimes found in concurrent transactions in which a substantial block of the same class of stock is issued for cash. Where no dependable evidence of

value is available, and questionable amounts are presented in statements, there should be full disclosure of the fact that the figures shown have not been validated either by appraisal or by the terms of related transactions.

The process of acquiring property by issuing stock to the former owner is often mistakenly referred to as a "purchase," "payment" being made in the form of shares of stock. Actually there is neither purchase nor payment. From the point of view of the corporation the transaction is not an exchange of assets but rather consists of the receipt of property from investors to whom shares of stock are then issued as evidences of their contributions of capital. Thus there is no basic distinction between a transaction in which the stockholder deposits cash and one in which he furnishes some other form of property. And where property other than money is invested equitable treatment of the investor requires that his contribution be measured in terms of its current cash value.

Issue of Stock for Property Illustrated. The M Co., for example, is organized for the purpose of taking over certain assets which M owns and expanding the activities in which he has been engaged. The authorized capital consists of 500,000 shares of common stock, with a par of $10 per share, and 10,000 shares of preferred stock, par $100. M Co. issues 400,000 shares of common stock to M upon receiving from M assets as follows:

	Amount Appearing in M's Accounts	Estimated Present Value
Inventories	$ 325,000	$ 300,000
Land	400,000	500,000
Buildings and Equipment (net)	1,500,000	1,750,000
Patents	——	1,450,000
	$2,225,000	$4,000,000

The figures of estimated present value represent careful estimates made by competent appraisers except in the case of patents. The value for patents is established by the board of directors by deducting the total of the other assets received from the total par amount of the shares issued to M. The preferred shares are issued to various parties for cash at par. Immediately after the transaction with M Co. M sells 100,000 shares of his stock to R for $750,000, cash. With

these conditions, and accepting the board's figure for patents, the resulting condensed position statement stands as follows:

Assets		*Equities*	
Cash	$1,000,000	Capital Stock—Preferred	$1,000,000
Inventories	300,000	Capital Stock—Common	4,000,000
Land	500,000		
Buildings and Equipment	1,750,000		
Patents	1,450,000		
	$5,000,000		$5,000,000

The validity of the foregoing statement may, however, be questioned. The immediate transfer of a large block of common stock from M to R on a cash basis affords in effect an independent commercial testing of the total values of property received by the M Co. from M. Assuming that M and R are both fully informed and are acting on a commercial basis, with reasonable intelligence, this transaction forces the conclusion that the assets contributed by M had a fair cash value, from a going-concern standpoint, of only $3,000,000 (400,000 times $7.50). This means—if the inventories, land, and buildings and equipment have been properly valued—that the sound value of the patents is only $450,000 and that the 400,000 shares issued to M were in effect issued at a discount of $1,000,000. A statement prepared on this basis—a more valid interpretation of the conditions—would show:

Assets		*Equities*		
Cash	$1,000,000	Capital Stock—Preferred		$1,000,000
Inventories	300,000	Capital Stock—Common:		
Land	500,000	Par	$4,000,000	
Buildings and Equipment	1,750,000	Discount (or overvaluation)	1,000,000	3,000,000
Patents*	450,000			
	$4,000,000			$4,000,000

*Value based on fact that M immediately transferred 100,000 shares to R at $7.50 per share, which implies total commercial value for assets contributed by M of only $3,000,000 and hence a value for patents of only $450,000.

The foregoing statement is of course incomplete in that the main heading is omitted, subdivisions of assets and equities are not indicated, and details such as number of shares authorized and issued are not shown.

Donated Stock. It was formerly common, particularly in states not permitting issue of stock at a discount, for mining corporations and other speculative enterprises to issue a large block of stock for property with the understanding that a portion of such block was to be returned to the corporate treasury as a "donation" for the purpose of facilitating the raising of working capital. By this device the stock was made nominally "fully paid and nonassessable," and was then reissued for cash at whatever amount per share would attract investors.

The K Co., to illustrate, is organized to develop a tract of mining land held by K. The authorized capital is 100,000 shares, par $10 each. Qualifying shares are issued to the members of the first board of directors at par for cash, $100. K agrees to transfer his land to the corporation for the balance of the stock with the understanding that 49,989 shares be donated to the Company's treasury for reissue, and this agreement is consummated. The donated stock is then issued to various parties at an average "price" of $5 per share. Organization costs, commissions, etc. are paid in cash, $20,000. Conventional entries for this situation, ignoring subscription accounts, are as follows:

(1)		
Cash	$ 100	
Capital Stock		$ 100
To record issue of directors' qualifying shares		
(2)		
Mining Land	999,900	
Capital Stock		999,900
To record issue of stock to K for mining land		
(3)		
Donated Treasury Stock	499,890	
Donated Capital.		499,890
To record receipt of 49,989 shares from K as a donation		
(4)		
Cash.	249,945	
Donated Capital	249,945	
Donated Treasury Stock		499,890
To record issue of treasury stock at $5 per share		
(5)		
Organization Costs	20,000	
Cash		20,000
To record payment of organization charges		

On the basis of these entries the position statement would stand as follows:

Assets		*Equities*	
Cash	$ 230,045	Capital Stock	$1,000,000
Organization Costs	20,000	Donated Capital	249,945
Mining Land	999,900		
	$1,249,945		$1,249,945

This treatment is not sound. Even without the demonstration of the issue of "donated" stock at $5 per share it should be apparent that this stock is in no sense an asset and that the "donated capital" is fictitious. The essence of the understanding with K is that he agrees to turn over his mining land to the corporation for 50,001 shares of stock; there is no indication that he pays a premium for the shares he retains. If, therefore, it is desired to use special accounts to trace the effect of the "donation" such accounts should be interpreted as offsets to capital stock and mining land, respectively, and should be reported accordingly. When the donated stock is reissued it becomes plain that the actual value of all the resources of the enterprise amounts to only $500,000 (from the point of view of those willing to invest cash concurrently with K's investment of mining property). Subtracting from this total the amount of cash and organization costs, $250,045, leaves $249,955 as the implicit cash value of the mining land. From this approach the above entries beginning with (2) should be revised as follows:

(2)

Mining Land	$999,900	
Capital Stock—Par		$999,900

(3)

Capital Stock—"Donated" Shares	499,890	
Mining Land—Valuation Adjustment		499,890

(4)

Cash	249,945	
Capital Stock—Discount (or overvaluation)	249,945	
Capital Stock—"Donated" Shares		499,890

(5)

(as above)

(6)

Capital Stock—Discount (or overvaluation)	250,055	
Mining Land—Valuation Adjustment		250,055

To reduce recorded value of mining land and stock equity to level indicated by issue of donated shares

A statement prepared at this point, arranged to show both nominal and implied cash values, would appear as follows:

Assets			*Equities*		
Cash		$230,045	Capital Stock:		
Mining Land:			Par	$1,000,000	
Nominal Valuation	$999,900		Discount (or overvaluation)	500,000	$500,000
Valuation Adjustment	749,945	249,955			
Organization Costs		20,000			
		$500,000			$500,000

The revised treatment might be modified slightly by exempting the ten shares issued for par from the revaluation to the $5 basis. If this were done the net value of the mining land would be found by multiplying the shares retained by K, 50,001, by the implied value per share, $5, which would result in a figure of $250,005. This modification, however, is subject to the objection that the issue of the large block is a more decisive indication of actual value than the issue of qualifying shares, and that it is unreasonable to use two values in recording a single issue of homogeneous units. The fact that a small block has been issued at par may be assumed to have been taken into account by the purchasers of donated stock as one of the factors determining the price they were willing to pay. In other words, if the directors had contributed less than $100 for the ten shares issued to them the price of the donated stock would presumably have been slightly under $5.

Composite Stock Issues. When two or more kinds of stock are issued jointly as an investment "package" how should the amount received be apportioned on the corporation's books? A general answer to this question may be found in the consideration of a simple illustration. The M Co. issues 100,000 shares of no-par common stock as a "bonus" to parties subscribing for 50,000 shares of preferred stock at par, $100. At about the same time another block of 100,000 shares of common stock is issued for $5 per share, cash. In this situation it seems reasonable to hold that the separate issue of a substantial amount of common stock for cash fixes the amount assignable to common stock where common and preferred shares are issued jointly. A subscription for one share of preferred stock, in other words, in effect includes a subscription for two shares of common stock at $5 each, which means that of each $100 paid in the amount of only $90 is applicable to the preferred. Under this interpretation

condensed entries covering the issue of the preferred and bonus stock are:

Cash	$5,000,000	
Capital Stock Preferred—Discount	500,000	
Capital Stock Preferred—Par		$5,000,000
Common Stock		500,000

It is possible that the implicit discount on preferred stock in such a case would not be construed by a court as discount subject to assessment. It represents, nevertheless, the difference between the par value and the amount paid in which is assignable to preferred and should be reported as such. That the preferred stock presumably has a prior claim on assets to the extent of par value in the event of dissolution need not alter this conclusion.

Where all of the stock is issued in composite units it may be necessary to divide the amount paid in arbitrarily, at least for the time being. If the junior stock involved has a minimum legal value a corresponding amount of the total paid in—for want of a better figure—may be assigned to the common stock. Seldom if ever is it reasonable to assume that one type of stock represents no recognizable investment; in any going concern even the residual stock has some value, due to the control represented and the speculative possibilities. In some cases the only feasible treatment at the outset may be to credit the entire amount received to a joint account. However, if market values for one or both issues become established *soon after organization,* the preliminary accounting may be revised on the basis of such values. Assume, for example, that the M Co. issues preferred and common stock jointly as above but that no shares of either preferred or common are issued separately. The following entries reflect this condition:

Cash	$5,000,000	
Capital Stock—Preferred and Common . . .		$5,000,000
To record issue of 50,000 shares of preferred, and 100,000 shares of common stock as a "bonus" therewith, the total proceeds being $5,000,000		

Shortly thereafter, on the basis of a number of transfers, the recognized market prices of the preferred and common stock are $94.50 and $5.25 per share, respectively, making the value per unit $105. It would now be possible, and not unreasonable, to apportion the

proceeds of the joint issue on the basis of these valuations, which would mean assigning 945/1050, or 90%, to the preferred issue and the balance of 105/1050, or 10%, to the common stock. This suggestion must not be pushed too far, as market values some time after organization may not reflect the original relative values.

It may be difficult to issue par stock as a bonus without rendering it liable to assessment. This fact sometimes leads to the nominal validation of par by the procedure outlined above in the discussion of donated stock, as a means of obtaining a supply of stock that can be issued without explicit consideration.

Book Value of Capital Stock. Book value is the amount of the stock equity as shown by the accounts of the issuing corporation, including those which register the effects of operation and other changes; and book value per share is total book value divided by the number of shares actually outstanding. At the time the stock is issued book value and market value should be identical, but this condition cannot be expected to persist due to the many factors affecting market prices which are not fully and continuously reflected in the accounts of the corporation. Where there is but one class of stock outstanding the only problem arising in computing book value is the interpretation of particular accounts. Amounts appearing in treasury stock and other off-setting accounts must be deducted, and all elements of retained earnings, however labeled in the ledger, should be included. Occasionally "reserves" are established under conditions which make it especially difficult to determine their character. Dividends payable are a liability and should be excluded from the computation of proprietary equity.

Where preferred stock is of the typical par type, with no participating features and no special provision for redemption, the equity of the holders is limited to par. The book value of such stock from the standpoint of amount invested, however, is either more or less than par where the stock is issued at a premium or a discount. In the case of preferred issues with special features finding a satisfactory basis on which to assign the total stock equity to the senior and junior issues may be troublesome. For example, if preferred stock with a par of $100 per share, and issued at that figure, has a prior claim to assets in the event of liquidation of $120 per share, the assumption that the book value of the preferred is $120 may result in an unreasonably small book value—from the standpoint of the

going concern—for the common stock or even in the ridiculous conclusion that the book value of the common is less than zero. In such a situation it is proper, in calculating and presenting book value of common stock, to assign to the preferred stock only the amount invested, with the liquidation situation included in the accompanying explanation. If the preferred stock participates with the common in the net proceeds of liquidation, after par values of both issues have been taken care of, the total book value may ordinarily be assigned in accordance with the liquidation conditions, provided the basis is clearly reported.

Dividends in arrears on cumulative preferred stock represent a claim to earnings, outranking the rights of holders of junior stock, and the effect of such a claim should be recognized in the position statement, at least to the extent of a footnote. Unappropriated dividends on non-cumulative preferred stock are likewise sometimes construed as an equity of the preferred shareholders where earned. However, the legal situation is generally such that preferred dividend arrearages, prior to action by the board of directors or institution of reorganization or liquidation procedure, constitute a "shadow" on the equity of junior stockholders rather than an outright deduction therefrom.

From the standpoint of the going concern a premium that must be paid to preferred shareholders in the event of redemption is not a recognizable portion of the senior equity, particularly where there is no due date and retirement is optional with the corporation.

The portion of book value assigned to preferred stock of the no-par type should in general be determined by accepting either the amount paid-in or the stated amount to be given priority in liquidation, whichever seems the more reasonable under a given set of conditions, as a starting point, with suitable modification on account of participating rights or other special features as outlined above.

Where two or more specialized classes of stock are outstanding, precise assignments of book value to the several issues may be more misleading than helpful, and in this event a brief statement of the principal rights and relationships involved should be employed in lieu of assignment where the question of book value is raised.

Treatment of Stock Issue Costs. The costs incurred in raising funds from stockholders—like other promoting, organizing, and financing charges—represent an asset rather than an expense or loss, and should

be dealt with accordingly in the corporate accounts. Such costs include legal and other professional fees incurred in setting up the capital structure and effecting arrangements for issuing stock, printing and engraving charges, clerical costs, and commissions of financial agents. A reasonably detailed record of stock issue costs should be maintained, to provide a basis for full disclosure of such costs wherever this may be needed and to facilitate proper subsequent treatment.

The common practice of writing off costs of raising capital immediately or arbitrarily over a short period should not be condoned. Using funds in the essential process of raising money and launching the enterprise gives rise to no less valid and recognizable assets than using funds to build a building. Without capital, indeed, it would be impossible to go forward with the process of acquiring the specific tangible assets needed in operation. This means that the total capital invested is not reduced by the act of paying for services required in capital raising any more than it is by the act of paying for the services of the architect or bricklayer. It follows that the immediate deduction of stock issue costs from so-called capital "surplus"—as often recommended—is entirely unjustified and amounts to downright misrepresentation. If the stockholder invests $100, and through the application of an unfortunate legal theory the amount of $50 of this investment is labeled "surplus," the accountant is nevertheless obligated to report the entire amount as long as no capital losses have been incurred. If he deducts financing costs of—for example—$5 from the portion of the capital designated as "surplus," with a resulting showing of a total remaining investment of only $95, he is guilty of a definite misstatement.

Since stock issues as a rule have no maturity date the issue costs represent ordinarily an asset of indefinite life, not subject to amortization. Where, however, there is a return of capital pro rata, or all or part of a particular issue is redeemed or otherwise retired, an appropriate part of the issue costs should be written off.

Questions

1. What are the three main steps into which the work of launching a corporate enterprise may be divided?

2. Define authorized capital, stock subscribed, stock outstanding, unissued stock, treasury stock.

3. What is meant by "par value" of capital stock? Discuss the origin and use of par stocks.

4. What is the implicit advantage of stock without par value? Why has this advantage not, in general, been realized?

5. What is meant by common stock? Discuss the nature and use of preferred stocks.

6. Describe the typical stock certificate.

7. Outline the accounting for stock subscriptions, including the handling of installments and defaults. How should the subscriptions and stock subscribed accounts be reported in the position statement?

8. Should unissued stock be given recognition in the accounts?

9. Define stock discount. Should discount be recorded in the accounts and statements, and if so, how? Contrast stock discount and cost of raising capital.

10. "Discount on stock is a deferred charge to operations which should be absorbed as soon as revenues are adequate for the purpose." Discuss.

11. "An important reason for prompt amortization of discount on stock is the desirability of relieving the stockholders from the contingent liability involved as soon as possible." Discuss.

12. Under what circumstances are stockholders assessed? What action is open to the corporation where a shareholder fails to pay?

13. A, an original stockholder, owns 100 shares of X Co. stock, par $100 per share, acquired at $90 per share. B, also an original stockholder, owns 100 shares for which he paid $105 each. Ignoring the effect of other possible holdings, is X Co. stock assessable, and if so, how would an assessment be levied?

14. How should discount on preferred stock be recorded, assuming that the par value of the preferred stock represents a prior claim to assets?

15. What is the nature of premium on par-value stock and how should it be reported?

16. Ideally, how should the consideration received for no-par stock be recorded? What is the usual practice?

17. What is the amount of the investment where stock is issued for property other than cash? Explain the use of indirect evidence in measuring the amount recognizable on the corporation's books in such cases.

18. With an illustration explain the origin and significance of stock "donated to raise working capital" in accordance with an understanding reached before the stock was issued. Does the "donating" stockholder make a sacrifice? Explain.

19. Illustrate the proper method of allocating the amount invested where two or more classes of shares are issued as a unit.

20. Define book value of capital stock. Point out some of the problems which arise in allocating total book value where two or more classes of stock are outstanding. Are preferred dividends in arrears an offset to the recorded value of the junior stock issue?

21. Discuss the accounting treatment of financing costs. Argue that the cost of an investment banker's services is no more subject to question, from the standpoint of economic validity, than the cost of a carpenter's services.

XXXVI

CORPORATE CAPITAL ACCOUNTS—Continued

Split-Ups and Reductions. A split-up is any procedure by which the number of shares outstanding is increased without any change in the total stock equity or its main subdivisions. The M Co., for example, has outstanding 100,000 shares of stock with a par value of $100 each. To increase the marketability of the stock, which has reached a price of $400 per share, with the result that the market for the shares is becoming less active, steps are taken to change the capitalization to 1,000,000 shares with a par value of $10. The old certificates are then called in and new certificates issued on the basis of ten shares of new stock for each old share held. The transaction makes no change in the amount of formal capital, which remains at $10,000,000, and there is no adjustment of the amount of retained earnings. The only effect on the equity of the stockholder is the increase in the number of equal parts into which such equity is divided. It follows that no entries are required in the general ledger, although revision of the stock ledger with respect to number of shares in individual holdings is needed. The title of the capital stock account in the general ledger may also need some modification.

A recapitalization in which outstanding par stock is called in and a larger number of no-par shares are issued in exchange, is a form of split-up. Issue of par stock in exchange for no-par stock may similarly result in an increase in the number of shares outstanding.

Issue of new certificates to replace those outstanding, with no change in the number of shares, cannot be defined as a split-up, whatever the reason for the change.

If capitalization of earnings is authorized as a feature of an increase in the number of outstanding shares resulting from recapi-

talization or other process, the transaction represents a combination of the split-up and the stock dividend. See discussion of such "dividends" in the following chapter.

Reduction in number of shares outstanding, with no change in the amount of capital, is likewise a nominal occurrence from an accounting standpoint. The R Co., for example, has outstanding 1,000,000 shares of no-par stock, with a stated and paid-in value of $5 per share. The capital structure is changed to 200,000 shares of stock with a par value of $25 each, and the old certificates are called in and new issued. The transaction results in no change in the amount of capital, which remains at $5,000,000, and again no entries are required except in the detailed supporting records.

Stock Warrants and Rights. For example, assume that the M Co. issues 1,000 shares of preferred stock at par, $100 per share, with warrants attached to the certificates which authorize the holder thereof to subscribe for two shares of no-par common stock at $5 per share for each share of preferred stock with respect to which the warrants were issued. The warrants are in the form of detachable certificates and are separately transferable; they expire one year from date of issue. At the date the preferred stock is issued the no-par stock has a market value of $6 per share and warrants are being sold at a corresponding figure. The outstanding common stock amounts to 98,000 shares with a paid-in value of $588,000. There is no retained income on the books. Under these conditions the following entries are appropriate to cover the issue of preferred stock with warrants:

Cash	$100,000	
Capital Stock Preferred—Discount	2,000	
Capital Stock Preferred—Par		$100,000
Common Stock Warrants		2,000

An alternative treatment, postponing the separation of the amount paid in between preferred stock and warrants, is as follows:

Cash	$100,000	
Capital Stock Preferred with Warrants		$100,000

Immediately after issue, warrants to subscribe for 500 shares of common stock are exercised. The necessary entries—following the first treatment shown above—are:

Cash	$2,500	
Common Stock Warrants	500	
Common Stock		$3,000

This method of dealing with the situation accepts the view that of the total paid in for each share of preferred stock with warrants $2 represents the amount contributed by the investor assignable to the warrants to purchase common stock. The procedure commonly followed in practice, which ignores the implied discount on preferred stock, would result in this case in a paid-in value for common stock of only $5 per share. The entries given have the advantage of showing clearly the composition, from the standpoint of sources, of the total paid-in capital. Moreover, the implicit discount on preferred stock represents at least a theoretic possible assessment of preferred shareholders.

One year later—continuing the example—the remaining warrants are exercised by the holders. At this time the retained earnings, all applicable to the common stock, amount to $150,000. The market value of the stock is $8 per share. Notwithstanding the new conditions the entries on the Company's books are on the same basis as those covering the earlier exercise of warrants:

Cash	$7,500	
Common Stock Warrants	1,500	
Common Stock		$9,000

The most familiar case of stock rights arises where all stockholders, or all holders of a particular class, receive warrants acknowledging their right to subscribe pro rata for a block of authorized stock which is being issued as a means of raising additional capital. When such rights are issued no general entries whatever are required on the company's books (although a footnote indicating that rights are outstanding is desirable in the position statement). When the rights are exercised the proceeds are recorded in the capital accounts precisely as in the case of any original issue. Rights which stockholders allow to lapse are canceled and the stock represented thereby is issued—if desired—to outsiders.

Where the subscription price attaching to rights is less than the prevailing market value of the outstanding shares the right to subscribe in itself comes to have a market value. For example, if a corporation has 100,000 shares outstanding, with a market price of $80 per share, and issues rights to subscribe for 10,000 additional

shares at \$69 per share, a part of the market value of the stock shifts to the rights. With these conditions, and ignoring possible commissions or other incidental factors, the market value of the right attaching to each existing share will be the difference between the present market value per share of \$80 and the theoretic market value after the additional shares have been issued, \$79 (\$8,690,000 divided by 110,000), or \$1, the market value of the right to subscribe for one new share will be \$10, and the value of all the rights will be \$100,000. However, the market value of rights is significant primarily to the stockholder, in determining the apportionment of his investment for income-tax purposes, rather than to the issuing corporation.

Where issued in the names of particular parties stock warrants must be recorded in terms of such names on the underlying records of the company, in the same manner as stock certificates. In this connection use of a distinct stock ledger may be advisable, particularly where transfers are numerous. The corporation often endeavors to facilitate the transfer of fractional warrants for the convenience of shareholders. The lapse of warrants must be recorded in the underlying accounts affected.

Retirement of Preferred Stock. Preference stock issues are often subject to redemption at a stipulated "price" per share, usually at the option of the corporation. In many cases the call price includes a substantial premium. The M Co., for example, has outstanding 1,000 shares of 6% preferred stock issued at par, \$100,000, and callable at any dividend date, upon thirty days' notice, at 105. The Company decides to redeem the entire issue and takes action accordingly. The condensed entries are:

Capital Stock Preferred	\$100,000	
Retained Earnings	5,000	
Bank		\$105,000

If earnings had previously been appropriated in a special account to cover the premium required such account would of course be charged on the occasion of redemption.

Stock which has an established market may be retired through acquisition of shares as offered, although market operations are not in general a satisfactory means of redeeming an entire issue. Acquisition at less than book value results in an increase in the recorded equity of common stockholders (under the usual interpretation). The M Co., for example, acquires 100 shares of its outstanding pre-

ferred stock, with a book value of $100 per share, at an outlay of $9,000. The entries are:

Capital Stock Preferred	$10,000	
Bank		$9,000
Capital Stock Common—Adjustment Arising from Retirement of Preferred Shares		1,000

An equity adjustment arising in this manner should be viewed as a modification of capital and not as income.

In recording redemption of preferred stock any excess over par or stated value which represents part of the contribution or equity of such stock should be absorbed. Assume, for example, that the R Co. retires 1,000 shares of no-par, class A stock at an average outlay of $50 per share. This stock was issued at $60 per share, of which $40 was credited to stated capital and the balance to paid-in "surplus." The appropriate retirement entries are:

Class A Stock—Stated Capital	$40,000	
Class A Stock—Capital "Surplus"	20,000	
Bank		$50,000
Capital Stock Common—Adjustment Arising from Retirement of Preferred Shares		10,000

The retirement of any form of stock reduces the amount of the proprietary equity and thus narrows the cushion of resources protecting the commitments of the creditors. If, however, earnings have been accumulated in an amount sufficient to offset the reduction in capital resulting from the retirement no serious objection to the action can be offered from this standpoint. Redemption of preferred stock is often viewed as beneficial to the junior stockholders, especially in circumstances in which the dividend requirements of the preferred issue are embarrassing. Funds essential to the operation of the business should in no case be used to retire stock where redemption is not required by contract. If the funds for retirement are secured through the issue of other securities the transaction has the effect of an exchange.

Retirement of Common Stock. Specific provisions for redemption are seldom associated with the issue of common stock, as commonly it is to be expected that the residual equity will remain outstanding throughout the existence of the corporation. Circumstances occasionally arise, however, in which a corporation may desire to retire

a portion of its common stock. In a wasting-asset enterprise, for example, capital funds may become available in liquid form and it may be decided to use such funds to acquire the shares of stockholders who are willing to withdraw from the enterprise. Or a concern which has disposed of particular plants or other assets as a part of a program of permanent contraction of activity may find it convenient to use the funds thus liberated to redeem a part of the outstanding stock. It should be remembered, on the other hand, that in all such cases the alternative of pro-rata liquidating payments is available, and that such alternative is often the more convenient and satisfactory procedure.

The entries to record the retirement of shares of common stock are similar to those covering redemption of preferred stock. The equity adjustment arising in such transactions, however, does not represent a shift from one class of stock equity to another; it expresses, rather, the nominal advantage realized by either the retiring or the remaining shareholders of the same class. The M Co., for example, acquires 1,000 shares of common stock, with a par of $25,000 and a book value of $60,000, at an average "price" of $50 per share. The condensed entries are:

Capital Stock	$25,000	
Retained Earnings	35,000	
Bank		$50,000
Capital Stock—Adjustment Arising from Retirement of Shares		10,000

By this treatment the book value of the retired stock, including retained earnings as well as capital, is canceled, and the excess of such value over the payment made to retire the stock is reported as a special equity adjustment. If it were assumed that the equity adjustment could properly be returned to retained earnings it would appear that the effect of the transaction on retained earnings simmers down to a net charge of $25,000. If, on the other hand, the equity adjustment is construed as a modification of capital, as suggested by the form of entry shown above, the effect is an informal capitalization of that portion of the retiring shareholders' equity in retained earnings for which no payment was exacted—which, in other words, has virtually been donated to the remaining stockholders. If the Company paid $70 per share to the retiring stockholders, other conditions being unchanged, the appropriate entries would be:

Capital Stock	$25,000	
Retained Earnings	35,000	
Capital Stock—Adjustment Arising from Retirement of Shares	10,000	
Bank		$70,000

Here the remaining stockholders sacrifice a portion of their book equity in meeting the requirements of the retiring stockholders, and again there is the possibility of construing the adjustment as either an additional charge to retained earnings or as an offset to the capital account. It seems reasonable to conclude that while it is desirable to isolate the full amount of the increase or decrease in the equity of the remaining stockholders resulting from the retirement, there can be no serious objection to reporting such amount as a modification of retained earnings if full disclosure is made (although an assumption that total retained earnings could be increased by a retirement of shares would be unreasonable).

Interpretation of Adjustment from Retirement of Shares. There has been much discussion and controversy relative to the nature and treatment of the difference between the amount expended to retire stock and the book value of the stock at date of retirement. Under one approach—that recognized in the preceding sections—the difference is viewed as an equity adjustment (although opinions vary as to the assignment of the adjustment to the equity accounts). Under an alternative interpretation the difference is treated as an aspect of an implied asset revaluation. This alternative is the more logical, and deserves more consideration than it has received in practice.

Where shares are called at an agreed redemption "price" it seems reasonable to treat the premium as a special distribution of retained earnings. Where shares are acquired otherwise than by call, through stock market transactions or special negotiations, interpretation of effect may be more difficult. Assuming that corporation and stockholder are fully informed and acting intelligently on a commercial basis acquisition at a figure materially below book value implies that such value is overstated from the standpoint of going-concern value. Such overstatement may be in the form of unrecognized losses with respect to specific assets, or an unassignable reduction due to unsatisfactory earning power. Similarly acquisition of shares at a figure materially above book value implies that the going-concern values of specific assets are in excess of book amounts or that unrecognized intangibles, reflecting superior earning power, are pres-

ent. In general this second type of situation will arise only in connection with retirement of common shares.

For example, the M Co. has outstanding 100,000 shares of common stock, with a book value of $60 per share (of which $10 per share is reported as retained earnings). Following a period of successful operation the Company in recent years has been losing money and the outlook is regarded as unfavorable. However, the Company has a considerable amount of cash available and it is decided to ask the stockholders for tenders of stock to the amount of 10,000 shares at $25 per share. As a result of this plan 10,000 shares are retired at an outlay in cash of $250,000. The entries to record this retirement, following the line of interpretation just indicated, might be as follows:

Capital Stock	$500,000	
Retained Earnings	100,000	
Bank		$250,000
Asset Adjustment		350,000

The "asset adjustment" account, representing a partial recognition of the implied overvaluation of assets, would constitute a contra to the total of recorded assets unless and until the shrinkage in values were definitely recognized and allocated in whole or in part. Under a modification of this procedure the implied overvaluation might be acknowledged in full, by preliminary entries, thus:

Retained Earnings	$1,000,000	
Capital Stock Adjustment	2,500,000	
Asset Adjustment		$3,500,000

The entries covering the retirement of 10,000 shares would then be:

Capital Stock	$500,000	
Bank		$250,000
Capital Stock Adjustment		250,000

This treatment amounts substantially to a quasireorganization or "fresh start," although formal reduction of capital to absorb the balance of the "common stock adjustment," and an allocation of the "asset adjustment" would be necessary to complete the process.

Assuming conditions as above except that the Company is making money and has excellent prospects and that 10,000 shares are acquired at $75 per share, the entries required (if there is only partial recognition of the implied revaluation) would be:

Capital Stock	$500,000	
Retained Earnings	100,000	
Asset Adjustment.	150,000	
Bank		$750,000

With complete recognition of implied revaluation the entries are:

(1)

Asset Adjustment	$1,500,000	
Capital Stock Adjustment		$1,500,000

(2)

Capital Stock	500,000	
Retained Earnings.	100,000	
Capital Stock Adjustment	150,000	
Bank		750,000

As in the case of a revaluation downward it might be decided in a case of this type to assign the asset adjustment to tangible and intangible assets and to capitalize formally the balance of capital stock adjustment.

The foregoing brief consideration of the revaluation approach should serve to indicate the unreasonableness of the common assumption that a gain to the corporation emerges when shares are acquired at less than book value, or that a loss is suffered when shares are acquired at more than book value.

"Treasury" Shares. Stock once outstanding that has been acquired by the issuing corporation and is legally available for reissue is often referred to as "treasury" stock. Such stock may consist of shares that have been acquired for retirement, and are in effect retired, although without formal reduction of authorized capital, or it may be stock temporarily held by the corporation with the intention of reissue at any early date. The latter condition is found where stock is acquired for distribution among employees or customers, or in connection with efforts to influence the price of the shares, or—particularly in close corporations—as a means of eliminating a dissatisfied stockholder or placing the shares owned by the estate of a deceased stockholder in new hands. It is desirable that all acquisitions of shares, with the reasons therefor, should be clearly reported to the stockholders. It is of course objectionable for a board of directors to use the corporation as a vehicle for the manipulation of the market price of the company's own shares.

The point to be emphasized is that "treasury" shares are nothing more than a special case of unissued stock—unfortunately labeled.

Like other unissued shares they carry no vote and have no dividend rights. They are sometimes referred to as an element of "outstanding" stock but this is unreasonable usage. Such shares generally may be reissued without being first offered to existing stockholders (that is, without being subject to the right of preemption), but this minor technical point has no bearing on accounting interpretation. It follows that acquisitions of "treasury" shares are essentially retirements of stock and should be accounted for accordingly. The practice of charging a suspense account with the amount paid to retiring stockholders, which has been widely advocated, is not objectionable as a temporary treatment, but the amount in suspense should be closed out at the end of the accounting period or—at the latest—prior to the date of reissue.

"Treasury" Stock in the Position Statement. If the acquisition of "treasury" shares is properly accounted for as a retirement—at least temporarily—of a portion of the outstanding stock the only reference thereto in the position statement will be in the form of a parenthetic disclosure of the number of authorized and unissued shares. If the amount paid to the stockholders surrendering their shares is held in a suspense account—a procedure not entirely satisfactory—the amount in suspense should be reported as a contra to the total of the stock equity as otherwise determined.

The practice of showing the cost of treasury stock as an asset in the position statement—not as common as formerly—should be roundly condemned. Authorized stock in the hands of the issuing corporation is never a recognizable resource, whatever its origin; there is no distinction in this connection between unissued shares, donated shares, and "treasury" shares. Any form of shares available for issue represents merely a means of raising capital, not actual, realized property. The fact that treasury stock is acquired by the outlay of cash does not afford a valid basis for the conclusion that it constitutes an asset. The use of the term "purchase" is misleading in this connection. By acquiring stock the corporation in effect is reducing the outstanding equity, not obtaining an asset. The intention to reissue, moreover, does not justify any other interpretation. A corporation may retire a seasonal bank loan with the expectation of borrowing again shortly, but this does not justify treating the acquired note, secured through actual cash payment, as an asset. An established line of credit is a very desirable condition but prior to utilization

there is no recordable asset. Acquisition and reissue of shares, no matter how closely tied together, are two distinct transactions—(1) reduction of outstanding shares and (2) issue of authorized shares—and should be accounted for accordingly.

The view that treasury stock is an asset, although entirely untenable, dies hard. After listening to a statement of the fallacy of such doctrine the proponent usually replies about as follows:

> "No doubt you are right, for the great majority of cases, but circumstances occasionally arise which justify inclusion of treasury shares in current investments on the asset side. The treasurer of a corporation, for example, is authorized to invest the backlog of cash funds in first-class marketable securities and after looking the field over decides that the common shares of the corporation represent the most suitable investment available and acts accordingly. Surely it is appropriate here to treat the stock acquired as a good current asset, a part of net working capital. In fact any other treatment will not show the actual current position of the enterprise. Further, any other treatment is inconvenient and unnecessary in view of the fact that the stock will be sold whenever the cash is needed."

Waiving the question of the propriety of using the corporation's own stock for the purpose of employing cash which may shortly be required for use in operation, it is only necessary in rebutting such argument to point out again that temporarily idle funds may often be used to advantage to reduce current liabilities and that an asset is not thereby acquired. In other words, the fact that liquid funds have been wisely utilized does not force the conclusion that they have been invested in assets. The reference to convenience as a justification for bad practice need not be taken seriously.

Even where treasury shares are covered by subscriptions the stock itself does not constitute an asset. If there is an asset present in this case it consists of the subscriptions receivable. Moreover, as pointed out in the preceding chapter, the treatment of promises to invest as actual assets is questionable.

Back of all the sloppy thinking and practice relative to "treasury" shares—including the fantastic idea that the excess of amount received on reissue over amount paid out on acquisition is taxable income—lies unfortunate terminology and the unsound notion that the acquired shares are an asset to the corporation.

Other Transactions Affecting Capital Stock. Stock is sometimes issued with the privilege of conversion into another class of stock, under prescribed conditions, and occasionally corporate bond issues are convertible into capital stock. Under the usual treatment the

accounting for a conversion simmers down to the elimination of the book value of the security retired and the recognition of the security issued in terms of such book value. Thus if a share of preferred stock with a recorded value of $100 is converted into five shares of no-par common stock, the conversion is accounted for by a charge of $100 to the preferred stock account and a credit of this same amount to the common stock account (divided, perhaps, between stated value and capital in excess thereof). If the book equity of the stock converted is represented in part by retained earnings the ideal procedure—as in the case of any stock retirement—includes a charge to retained earnings for the appropriate amount. If the stock issued has a par and such amount is less than the total book value eliminated, the difference should be recorded as a form of premium or capital "surplus"; similarly a discount or offset to par may arise upon conversion. Where the stock issued has a recognized market value the ideal treatment uses such value as the issue "price," as in the case of an issue for cash, and the difference between this amount and the total book value eliminated becomes a special equity adjustment.

In reorganization some adjustment of the capital stock account is usually required. If asset values are restated the total book value of securities is modified accordingly; if recorded asset values remain unchanged the entries necessary are confined to a realignment of equity accounts in keeping with the terms of the reorganization. In the reorganization of the financially embarrassed concern concessions are usually made by the stockholders in favor of the creditors, or by common stockholders in favor of preference stock. In a nominal reorganization—confined to a split-up, exchange of par stock for no-par stock, or similar transaction—the retained earnings may not be disturbed. In a reorganization following a receivership or other major shake-up, on the other hand, the recorded retained earnings (or deficit) is usually eliminated or modified.

A merger occurs where one or more concerns is absorbed by another going concern or where two or more companies are combined through the medium of a new corporation organized for the purpose. In such a transaction the books of the company or companies dissolved should be closed, on the basis of entries adequately reflecting the circumstances; and the entries on the books of the continuing corporation must show the assets taken over and liabilities assumed, and the issue of securities in exchange for those absorbed. As in the case of less complex transactions the proper basis on which to record

the acquisitions of property through issue of stock is the fair market value of the assets acquired. The stock or other securities issued to finance the merger, in other words, should be set up at implicit cash issue value, as measured by the assets invested, rather than in terms of nominal valuations not in accord with the economic conditions. The established market value of securities issued or of the securities absorbed at the date of merger may furnish indirect evidence of the value of the property involved. Seldom do the book values of the corporations which are dissolved yield proper figures, without adjustment, for the accounts of the continuing corporation.

Pro-rata payments to stockholders in liquidation, after complete absorption of retained earnings, are chargeable to the capital stock account. If desired a special contra account may be employed until the process is complete, a procedure which has the advantage of making unnecessary piecemeal adjustment of the underlying accounts of the capital stock ledger.

Reorganization Entries Illustrated. The R Co., a Delaware corporation, is organized to succeed the R Co. of Michigan. The authorized capital of the predecessor corporation is 100,000 shares of common stock with a par of $100 per share, and 50,000 shares of 6% preferred stock, also with a par of $100, and all shares of both classes of stock are outstanding. The new company has an authorized capital of 3,000,000 shares of common stock without par value and 50,000 shares of 5%, non-voting preferred stock. At the time of the reorganization the retained earnings of the old company stand at $5,000,000. All of the assets and liabilities are taken over by the new company, and operations are continued without interruption. Common stock of the Delaware corporation is issued to the common stockholders of the Michigan company in the ratio of twenty shares of no-par stock for each share of old stock, and the preferred stockholders are given one share of new common and one share of 5% preferred for each share of old stock held. It is decided to give the new common stock a capital value of $5 per share and set up the new preferred stock at par, which makes it necessary to capitalize accumulated earnings in the amount of $250,000, the capital value of the common shares issued to the preferred stockholders. Assuming that the entire transaction is carried through as planned, including the dissolution of the Michigan company, and that the old books are

continued in use, the general entries summarizing the exchange of securities—on the basis indicated—are:

Capital Stock Common	$10,000,000	
Capital Stock 6% Preferred	5,000,000	
Retained Earnings	250,000	
Capital Stock No-Par Common		$10,250,000
Capital Stock 5% Preferred		5,000,000

According to these entries the entire transaction simmers down to a conversion of the old par-value common stock to no-par stock outstanding with the same capital value, and substitution of new 5% preferred stock for the 6% stock outstanding, a small block of no-par stock being issued therewith as a consideration in connection with the reduction of the dividend rate. Retained earnings are unchanged except for amount transferred to the equity of the preferred stockholders. In this situation the change in entities and securities is so nominal in character that determination of present values of the assets received, and setting up of entirely new equities in corresponding amount, would hardly be required (although not unjustified if present values were materially more or less than recorded values).

The S Co., to illustrate a different type of case, has been operating at a loss for some time and is decidedly in need of working capital. The Company is also embarrassed by a capital structure in which is included 10,000 shares of 7% cumulative preferred stock, par $100 each, on which dividends are in arrears to the amount of $38.50 per share, and 6% debenture bonds totaling $1,000,000. Current liabilities amount to $500,000. The common stock consists of 200,000 shares with a par value of $10 each. The books show an accumulated deficit of $250,000. Set up in condensed form these data appear as follows:

Assets	$4,250,000	Current Liabilities	$ 500,000
Deficit	250,000	Debenture Bonds	1,000,000
		Capital Stock Preferred	1,000,000*
		Capital Stock Common	2,000,000
	$4,500,000		$4,500,000

* Dividends in arrears, $385,000.

At this juncture, to forestall receivership and possible liquidation,

a committee is formed to work out a program of voluntary reorganization which will provide additional funds and improve the capital structure. The plan adopted by the committee is as follows:

Corporate Entity

No change

Assets

1. Land holdings have a present value of $225,000 in excess of book value.
2. Buildings and equipment have a present value of $216,250 in excess of net book value.
3. Various other assets have a present value of $100,000 less than book value.

Capitalization

1. 1,000,000 shares of no-par common stock.
2. 50,000 shares of 6%, non-cumulative stock, par $50 each.
3. No bonds.

Exchange of Securities

1. 20,000 shares of 6% preferred stock and 20,000 shares of no-par common stock for outstanding bonds.
2. 27,700 shares of 6% preferred stock for 10,000 shares of 7% preferred.
3. 662,500 shares of no-par common for 200,000 shares of old common stock (and subscriptions to additional common stock, see below).

New Capital

1. Issue of 200,000 shares of no-par common stock to present common stockholders at $2.50 per share—as a condition of the reorganization.
2. Issue of balance of preferred stock, 2,300 shares, and of the common, 117,500 shares, on the market as funds are needed.

Assuming that this plan is carried through immediately precisely as outlined, except for the issuing of the balance of preferred and common stock, and ignoring reorganization costs and other complications, the required entries are:

(1)

Assets (detailed)	$ 441,250	
Assets (detailed)		$ 100,000
Common Stockholders—Reorganization Account		341,250
To record asset adjustments, and effect on common stock equity		

(2)

Debenture Bonds	1,000,000	
Common Stockholders—Reorganization Account	50,000	
Capital Stock Preferred 6%		1,000,000
Capital Stock Common No-Par		50,000
To record exchange of bonds and preferred stock and to charge common stock equity with book value (at $2.50 per share) of new common stock issued to bondholders		

(3)

Capital Stock Preferred 7%	1,000,000	
Common Stockholders—Reorganization Account	385,000	
Capital Stock Preferred 6%		1,385,000
To record exchange of old preferred stock and dividend claims for new preferred, charging common stockholders with the amount of dividends in arrears, not previously booked		

(4)

Capital Stock Common	2,000,000	
Deficit		250,000
Common Stockholders—Reorganization Account		93,750
Capital Stock Common No-Par		1,656,250
To record exchange of common shares per reorganization plan, with closing of adjustments to common stock		

(5)

Cash	500,000	
Capital Stock Common No-Par		500,000
To record issue of 200,000 shares of stock pro rata to holders of old common stock at $2.50 per share		

After posting these entries the condition of the accounts is as indicated by the following:

Assets (including new cash)	$5,091,250	Current Liabilities	$ 500,000
		Capital Stock Preferred 6%	2,385,000
		Capital Stock Common No-Par	2,206,250
	$5,091,250		$5,091,250

Treatment of Retained Earnings of Predecessor Company. It is sometimes argued that in reorganizations and mergers the amount of the retained earnings of a predecessor can be carried forward as such on the books of the successor corporation. Is this treatment sound? In general a negative answer is required. The continuing company acquires the assets and may assume the liabilities of the former company but the composition of the stock equity of the old concern has no bearing on the accounts of the successor. Retained earnings constitute a section of the total stock equity of a corporation, a section having a particular origin, and the amount of such earnings (and the concept itself) have meaning only when considered from the standpoint of the specific entity that accumulated the earnings.

On the other hand, as indicated earlier, if a reorganization is of the nominal type, with no vital change in the corporate entity or the component equities even if a new legal entity—in the strict sense—is

created, the carrying forward of the amount of the predecessor stock equity, without rearrangement of constituent elements, may be justified. This treatment may facilitate the continuation of an established dividend policy, a point of special importance where preferred stock is outstanding.

In some cases more important adjustments are involved when there is no change in the identity of the corporation than in some situations where a new legal entity is brought into being. That is, the quasireorganization may be a more important event than a nominal change in entity. This accounts in part for the view that in a quasi or "fresh start" accountingwise the balance of retained earnings, if any, should be treated thereafter as invested capital.

Capital Stock Records. The forms and records peculiar to the corporation arise primarily in the accounting for the stockholders' equity. In handling subscriptions, to begin with, special journal and ledger rulings are often employed. The following suggests the character of a simple subscriptions journal:

Date	Subscriber	Address	Details	Folio	Subscriptions	Stock Subscribed

In posting this journal the total of the subscriptions column is charged to the controlling subscriptions account and the corresponding footing of the stock subscribed column is credited to capital stock subscribed. This form also provides for the postings to the accounts of the individual subscribers. Under some procedures, especially where the transactions are very numerous, posting of charges to the underlying accounts is accomplished from subscription slips or sheets. A standard ledger form will usually suffice for the subscriber's account, although a specialized device may be desirable where subscriptions are collectible on the installment plan. Collections of

subscriptions can be recorded through the regular receipts journal or by means of a distinct type of book.

Similarly a separate journal may be a convenience in recording the original issue of capital stock. The following is illustrative:

Date	Stockholder	Address	Memo	Folio	Stock Subscribed	Capital Stock

If some stock is issued immediately for cash a cash column should be included in the stock journal. Posting to the individual accounts of the stock ledger may be accomplished directly from certificate stubs or special sheets rather than from a columnar journal. The following indicates the nature of the sheet or card required for the underlying stockholders' accounts:

Name______________________				Address______________________			
Date	Cert. No.	Shares	Memo	Folio	Dr.	Cr.	Bal.

The reverse side of such a sheet may be used for further details if such are desired.

For stocks with par value the accounts of the stock ledger can be conveniently kept in terms of par and number of shares. In the case of no-par stock the account may be kept in number of shares alone

or in number of shares and stated or declared capital value. Total paid-in value can be subdivided by stockholders' accounts if desired, but use of varying values for the different accounts, corresponding to varying amounts paid in for successive blocks issued, is not satisfactory in view of the fact that all shares of a particular class are identical with respect to dividend rights and all other characteristics.

A stock transfer book, which may be used as a posting medium, is needed to record transfers from one shareholder to another where such transactions are numerous. The following suggests the nature of such a book:

Date	Transferor	Cert. No.	Fol.	Shares		Transferee	Cert. No.	Fol.	Shares	
				No.	Par				No.	Par

Large corporations, with thousands of stockholders and many transfers, usually employ a trust company or other authorized party to act as transfer agent and keep the stock records. The work of the transfer agent requires specialized forms and a systematic procedure designed to furnish the corporation with accurate and complete information as to the stock holdings at any time. The corporation must of course have a list of stockholders and the shares held by each of the date of record specified in each dividend declaration. Posting to the stock ledger is accomplished from the daily sheets or vouchers. Usually a copy of each daily record of transfers is supplied to the corporation.

An important supplementary corporate record is that containing the minutes of meetings of officers and directors.

Questions

1. Define the "split-up." Does such a transaction require entries in the accounts?

2. Explain the use of stock rights. What entries are required by corporation: (a) upon issue of rights; (b) upon exercise of rights? Answer same questions for stockholder.

3. How should redemption premium upon retirement of preferred stock be interpreted? Excess of total book value of preferred stock over amount paid to retiring stockholders?

4. Under what circumstances may a corporation reasonably retire a portion of the outstanding common stock? What is an alternative procedure in these cases?

5. With an illustration contrast the "equity adjustment approach" and the "revaluation approach" to the problem of interpreting differences between book value of stock and amount paid to retiring stockholders when outstanding shares are acquired by the corporation.

6. Give the argument against the interpretation of "treasury" stock as an asset. Discuss the accounting for "treasury" stock.

7. How should the unassigned cost of "treasury" shares be presented in the position statement in the case of a company organized under a statute which prohibits the expenditure of an amount to acquire outstanding shares in excess of the amount of retained earnings?

8. How should the amount of the credit to capital stock be determined where common shares are issued upon exercise of the conversion privilege by preferred stockholders?

9. Illustrate the treatment of stock equity accounts in a nominal reorganization. In a reorganization involving new financing. In a "quasi" or "fresh start."

10. May the retained earnings of constituent companies be transferred to the accounts of the continuing corporation in the case of a merger?

11. Name and describe the principal specialized books and forms required in connection with the accounting for capital stock.

XXXVII

DIVIDENDS AND RETAINED EARNINGS

Types of Dividends. In general dividends are pro-rata distributions to corporate shareholders which are appropriated from current or accumulated net income. The usual classification is in terms of manner or medium of payment, as follows: (1) cash dividends; (2) property dividends; (3) note and bond dividends; (4) stock "dividends." The great majority of all dividends are of the first type; cash is the convenient medium of dividend disbursement, from the standpoint of the stockholder as well as that of the corporation. Occasionally securities such as government bonds or the stock of an affiliated company are distributed among the stockholders in the form of a dividend, and instances are known of the apportionment of merchandise and other assets in this manner. Dividends in the form of short-term scrip or notes, with or without interest, are essentially "deferred" dividends, and the use of the long-term notes or bonds of the declaring company means a postponement of the actual distribution of corporate assets for the life of the security issued. Stock "dividends," as has often been pointed out, represent a permanent capitalization of dividend funds, and hence can hardly be classed as true dividends.

The Supreme Court has held that stock "dividends" are not income to the recipient shareholders, basing its opinion primarily on the proposition that such distributions bring about no assignment or transfer of corporate assets to stockholders. Faced with the necessity of passing on the significance of bond dividends, however, which likewise leave the assets of the corporation undisturbed, the Court shifted the vital test of dividend action to effect on the amount of the stock equity as such, and held that bonds of the declaring company issued as a dividend are income to the extent of their fair market

value as received since their disposition by the recipient does not affect his relative position as a stockholder. In a few cases dividends have been declared "payable" at the option of the shareholder in cash or stock. For income-tax purposes such distributions have been interpreted as cash dividends. In later court decisions the legal situation has been rendered more confused by the adoption of the theory that dividends "paid" in stock of one class to stockholders of another class represent taxable income to the recipient. An alternative and more tenable refinement, not widely appreciated, is the view that any dividend declaration in favor of the preferred stockholder, including stock "dividends," puts such stockholder in possession of rights not previously effective or recognizable, and hence may be considered as giving rise to income to the stockholder, whereas the capitalization of retained earnings on behalf of the common shareholder gives him no new rights whatever and hence cannot reasonably be treated as providing income to such stockholder.

Dividend declarations may be regular or irregular. Special distributions made in addition to a regular appropriation are often referred to as "extras." Taxes on retained earnings tend to promote payment of extras toward the end of the year. Preferred dividends, as noted in the preceding chapter, may be cumulative or noncumulative. Dividends on preferred stock are limited to the stated rate except where right of participation is enjoyed.

"Dividends" representing the apportionment of the proceeds of liquidation should not be confused with the distribution of income by the going concern.

Sources of Dividend Appropriations. Generally indorsed by accountants, and having considerable legal standing, is the view that dividends should not be declared in excess of the amount of net earnings, current or accumulated. On the whole this seems a commonsense position—ignoring the special cases where return of capital may be justified. However, there is some legal support for the use of the excess of the amount paid in by stockholders over par or stated capital (premium or capital "surplus"), and of the equity adjustment arising from upward revaluation of assets, as a source of dividend appropriations, particularly stock "dividends." It is usually not very difficult, moreover, for a corporation to create a "surplus" in the eyes of the law by taking formal action to reduce par or stated value of outstanding shares.

As a basis for dividend appropriations retained earnings may be broadly defined to include "nonoperating" and extraordinary items but not equity adjustments arising from retirement of outstanding securities. Additions to earnings resulting from corrections of past errors—restoration of asset values charged to maintenance, collection of receivables previously written off, adjustment of excessive depreciation allowances, etc.—are likewise available for appropriation, as are amounts properly returned from accounts representing retained earnings "reserved" or restricted to reflect some special condition or policy. Full disclosure of source is desirable in connection with dividends derived from so-called "capital gains" and other unusual items, or from income recognized through revisions of past accounting. Cash dividends should seldom if ever be based on credits arising from revaluations, although there is some justification for capitalizing such credits by means of stock "dividends." The appropriation of regular dividends from the amount contributed by stockholders in excess of par or stated value, whether originally paid in or brought about by a reduction in the amount of formal capital, is merely a disguised liquidation of the stockholders' investment and is obviously bad financial practice. If return of part of the funds originally invested is warranted it should be accomplished by appropriate action appropriately described.

In what order do dividends absorb earnings? Is it a case of "first-in, first-out" or "last-in, first-out," or should some other interpretation be applied? On the whole the most reasonable and useful assumption is that which views each dividend appropriation as a charge, first, to the current income—to the extent to which such income has been ascertained—and, second, to the retained earnings of prior years. This assumption is particularly desirable in statement presentation, as it results in emphasizing the difference—in either direction—between the income of the period and the dividends declared.

Dividend Policy. The existence of net earnings in general makes dividends legally possible but actual declaration and payment of cash dividends should not result from consideration of this factor alone. Cash is required to make the disbursement and the presence of earnings does not demonstrate that cash is available. If there are accumulated earnings it is legally possible—barring special action of creditors—to borrow funds for dividend purposes, but very seldom

if ever would such action be practicable or represent good financial policy. Further, even if the bank balance is substantial the need for funds to increase inventories, replace or expand plant facilities, reduce floating debt, or for other business purposes, may be such as to make immediate dividend appropriation unwise if not out of the question. To pay dividends in the face of an abnormal amount of current liabilities is tantamount to borrowing funds to make dividends possible. Accordingly, the board of directors—after being satisfied with respect to the existence of earnings and the legality of proposed dividend action—should carefully consider cash position, the cash budget, and the over-all financial situation before reaching a decision. Reports to stockholders should include a clear explanation of the conditions, as those not involved in actual management are prone to misunderstand failure of the directors to declare dividends in the face of earnings accumulation.

The limited significance of retained earnings in relation to dividend disbursements requires emphasis, particularly in view of certain common misconceptions. Dividends are *appropriated* from earnings but are *paid* (as a rule) in cash. The amount of earnings is the yardstick or gauge which shows the amount of dividends that may be declared without impinging upon capital, but is not in itself a measure of the medium of disbursement. Retained income, moreover, is in general supported by a cross-section of all the assets, rather than by a fund of cash or other liquid resources. This means that income accumulation as a reservoir for dividends in lean years does not actually insure the ability to maintain the stream of payments to stockholders. In fact dividends can seldom be long continued in the absence of current net income, no matter how large the total of accumulated earnings. Even where the strength of the working-capital position is exceptional the desire to maintain dividends is confronted with the necessity of conserving funds if survival is to be assured. Probably the most important means of making past earnings available to stockholders during years of no income is conversion of fixed assets into current coupled with the policy of sharply restricting expenditures for additions and replacements.

In small companies, with a handful of stockholders, dividend payments are often very irregular. On the other hand managements of large corporations whose securities are listed on the exchanges, and with stockholders numbering into the thousands, commonly make a considerable effort to maintain the flow of dividends, for the sake of

protecting the prestige and credit standing of the enterprise as well as to meet the needs of the rank and file of the investors. The general practice in many such concerns has been to establish a rate of dividend disbursement somewhat under the level of earning power and to recognize the dividend policy as an important consideration in the administration of working capital. Income accumulation has a special significance where preferred stock is outstanding because of the evident desirability of maintaining dividends on the senior issue or issues at the stated rate. Taxes on undistributed earnings tend to bring about periodic disbursements corresponding to periodic net income, and thus discourage the policy of stabilizing dividends.

Companies hard pressed for cash occasionally issue dividends in scrip, payable at some future date. Where the scrip is readily salable by the recipient such procedure is of some advantage to the stockholder in need of funds. The declaration of such a dividend at the regular date may also be less damaging to corporate prestige than outright passing. For most situations, however, the use of this device is not advisable.

As a matter of policy should dividends be based on capital gains and other unusual earnings? An affirmative answer is justified where the gains are matched by increase in liquid funds and there are no pressing needs calling for utilization within the business. It is often true, no doubt, that capital gains in large measure reflect a change in the value of money rather than an effective increase of resources in terms of purchasing power, but this condition hardly justifies retention of the funds made available unless working capital needs bolstering or major replacements are imminent. Where dividends are based directly on unusual gains, however, it is advisable that they be declared and reported as extra or special disbursements, so that there is no danger of misunderstanding among present or prospective investors.

The authority to declare dividends rests with the board of directors and the law permits the board to exercise a wide discretion with respect to the circumstances under which dividends are declared and paid. In general, however, dividends must not be paid when a company is insolvent or when the dividend action would precipitate insolvency, even in the presence of a credit balance in the retained earnings account. The right of the directors to withhold dividends, moreover, may be challenged under exceptional circumstances. The freedom of action of the board may also be restricted in a variety of

ways by contracts between the corporation and stockholders or creditors.

Accumulated Losses and Dividends. Must all losses suffered in the past be recouped before dividends may be appropriated? In general this much-debated question should be answered in the affirmative, particularly from the standpoint of dominant legal doctrines. A primary requirement of corporate policy is the maintenance of the integrity of capital and if capital has been impaired by losses subsequent earnings are available for dividends only after capital has been restored. Where the accumulated deficit is large the rigid application of this rule may work a hardship on stockholders in need of funds but there is no alternative unless the prevailing conception of corporate capital is to be considered inapplicable. Were dividends to be based on current income, without consideration of the status of capital, the result might be the return of a large part of the capital funds as dividends in a short time. The operations of the X Co., for example, organized with a capital of $5,000,000, result as follows:

First-year profit	$ 500,000
Second-year loss	1,000,000
Third-year profit	1,000,000
Fourth-year loss	500,000

In this extreme situation, where there is evidently no loss or gain for the four years taken as a whole, the payment of $1,500,000 in dividends, based on the profits of the first and third years, would amount to a distribution of 30% of the capital of the enterprise.

On the other hand a corporation, like an individual, may deserve the opportunity to make a "fresh start" in some circumstances. The M Co., for example, begins business with a capital of $50,000,000, of which $20,000,000 is invested in a foreign country. Due to a political upheaval the foreign investment is wiped out, resulting in a deficit of $20,000,000. It appears to the management, moreover, that it would be unwise to attempt further operations abroad. Domestic business is being conducted on a satisfactory basis, but no unusual opportunities for expansion are in sight. In this situation the application of the rule that no dividends can be paid until past losses are fully recovered will require an accumulation of earnings, on the remaining capital, of $20,000,000. Further, if conditions remain unchanged it will be necessary for the Company to build up a huge fund, not needed in the business, before it is possible to consider the

payment of dividends. An exception is clearly required here. Assuming formal action by the stockholders, with full disclosure of the circumstances to all parties at interest, there can be no valid objection to a recapitalization on the basis of $30,000,000. The amount of $20,000,000 is gone, and under the new conditions restoration of capital is inadvisable. Nothing is to be gained, accordingly, by a rigid adherence to the original set-up. Even if there are bonds outstanding this conclusion is not unreasonable, although protection of the bondholders may require the retirement of bonds out of funds representing subsequent earnings before dividends are paid.

Recognizing the propriety of formal recapitalization to absorb losses in very special circumstances need not be considered as sponsoring the common practice of making transfers from capital account to "surplus" whenever a substantial loss is suffered. Such practice, in fact, deserves strong condemnation, especially where it results in obscuring the actual conditions. Reduction in capital should require consent of stockholders and creditors, specific approval of the incorporating instrumentality, and should be restricted to cases in which the change has real justification. Full disclosure, moreover, should be made, and the explanation should be included in at least two or three successive reports.

There is something to be said for a development in the direction of minimizing the legalistic position that formal capital must not be impaired by distributions to stockholders and giving more weight to considerations of financial administration. Rigid legal rules are a poor substitute for good management, and tend to prevent sensible action in certain types of situations. Assuming that a board of directors is competent and honest the decision as to when to distribute funds and in what amount might well be based on an examination of cash position, the needs of the enterprise for funds, and the welfare of the investors, without any specific attention being given to the amount of either stated capital or retained earnings.

Discount and Dividends. The M Co., for example, issues stock with a par of $100,000 to investors who have paid in $80,000. In this situation should earnings be accumulated in excess of the amount necessary to absorb the discount of $20,000 before dividends are declared? The answer depends in some measure upon the collateral circumstances. If the Company can use $20,000 of additional money to good advantage, it may be expedient to plow back earnings in this

amount in lieu of levying an assessment. Or if the interests of the creditors are not deemed to be adequately protected by a possible assessment, and actually calling an assessment seems inadvisable, expansion of the proprietary equity through retention of earnings to at least the full capital value of the outstanding stock may be justified. If, on the other hand, the amount paid in proves to be adequate to the needs of the business, and no question of financial strength is involved, insistence on discount accumulation prior to the payment of dividends is clearly objectionable from the standpoint of the stockholders, and may not be reasonable from any point of view. No one would hold that stock should be issued merely because it happens to be a part of the authorized capital, and similarly there is no good ground for holding that in every case a paid-in capital of less than par, acknowledged to be appropriate at the outset, must be built up to par value before any disbursement of earnings is made to stockholders.

Should original overvaluation, the "water" which attaches to stock which is nominally fully paid, be made good through income accumulation before the initial dividend is declared? This question is best answered by another query. If overvaluation can be countenanced at the outset why must earnings be dedicated to the accumulation of resources presumably not required in business operation? The way to deal with overvaluation is to employ sound values in the accounts to begin with, or to correct the misstatement as soon as it becomes apparent; withholding earnings from stockholders for a more or less considerable period is no solution.

Dividend Procedure. Dividends are declared by formal resolution of the board of directors, acting under authority conferred by the corporate by-laws. The practice of notifying all stockholders of the dividend declaration is often followed, even where not definitely required. In the larger companies notification is usually accomplished through publication of the information in one or more newspapers. The announcement may read somewhat as follows:

> The Board of Directors of the M Co., at their meeting on June 15, 1950, declared the regular quarterly dividend on outstanding common stock of $2.00 per share, and an extra dividend of $1.00 per share, both payable on July 10, 1950, to stockholders of record at the close of business June 30, 1950.

Dividend declarations are often numbered in sequence, as an added means of identification.

In effecting payment of a dividend a list of stockholders as of the record date must be prepared from the stock ledger. This should show names and addresses, shares held, and the amount of the dividend accruing to each stockholder. The checks must then be prepared from this list and mailed, on or before the payment date. A special bank account is sometimes established for dividend purposes. Since dividends are declared pro-rata to all stockholders of a given class no subsidiary ledger or record other than the stockholders' list is required. In large companies with many shareholders the work of preparing the list and making payment is a very considerable task. The transfer agent—where one is employed—may be responsible for the compilation of the list of holdings, but payment is made by the company. The transfer books may be closed for a period to facilitate the handling of a dividend declaration.

Assuming that the shares of M Co. stock outstanding—see above notice—total 500,000, and that the regular dividend is No. 21, the following entries indicate the nature of the general-ledger procedure:

June 15		
Dividend Charges	$1,500,000	
Dividend Payable—No. 21		$1,000,000
Dividend Payable—Extra		500,000
July 10		
Dividend Payable—No. 21	1,000,000	
Dividend Payable—Extra	500,000	
Bank		1,500,000

At the close of the period the amount of dividend charges should be closed to the current income account except where the appropriation is clearly applicable to accumulated earnings. A quarterly dividend, for example, is not assignable to monthly income. And a large extra or special dividend may be drawn in whole or in part from past earnings. If desired the account "Dividend Charges" may be dispensed with and the amount of the dividend charged directly to income or retained earnings.

The action of the board in appropriating earnings as dividends creates a liability in favor of the stockholders in the amount declared; by such action, in other words, a part of the proprietary equity is converted into a creditor claim, a claim under which the stockholder could sue the corporation if payment were not made in conformity with the prescribed conditions. Dividends payable are accordingly reported in the liability section of the position statement rather than

as an element of the stock equity. Dividends are payable to the persons who are stockholders on the selected record date, including those—if any—acquiring shares after declaration. On the record date the stock becomes "ex-dividend," and subsequent transfers do not affect the list of recipient shareholders.

The general entries covering the declaration and payment of dividends in property other than cash follow the pattern just outlined. Effecting a pro-rata transfer of the property to the stockholders, however, is likely to be a difficult matter—a sufficient reason for not attempting such action except under unusual circumstances. The amount of such a dividend should presumably be measured in the corporation's accounts by the book value of the property used as a medium of payment. In the stockholder's accounts, however, the fair market value of the property received determines the amount of recognizable (and taxable) income.

Dividends declared in scrip or other promises to pay are handled like cash dividends as far as declaration procedure is concerned. On the "payment" date the notes or bonds are distributed, and on the due date the outstanding instruments are redeemed in cash as presented by the holders—who may or may not be the parties to whom the dividend evidences were issued. Assume, for example, that a dividend of $1,000,000 is appropriated from earnings payable in sixty-day scrip without interest. The general entries are:

(1)		
Retained Earnings	$1,000,000	
Scrip Dividend Declared		$1,000,000
To record declaration		
(2)		
Scrip Dividend Declared	1,000,000	
Dividend Scrip Outstanding		1,000,000
To record issue of scrip		
(3)		
Dividend Scrip Outstanding	1,000,000	
Bank		1,000,000
To record redemption of scrip		

The nominal amount of a dividend in promises-to-pay may exceed the immediate discounted value of such promises and where this is true there is some justification for the use of the discounted value at the outset followed by accrual of the "interest" factor as time elapses. It is worth noting that dividends represented by notes or other creditor instruments are basically nothing but ordinary cash dividends

with the date of payment postponed for a stated period. Occasionally instances arise of the declaration of several successive cash dividends in advance. This procedure, like the scrip or note dividend, hasn't much to be said for it. If the financial position warrants it is reasonable to declare and pay a dividend. If the position is such that payment of a dividend is not currently justified there should be no declaration. Seldom if ever is it wise to make dividend commitments long in advance.

Unclaimed dividends should be carried as a liability until other disposition is authorized by the directors.

Dividends on Preferred Stock. Dividend procedures do not vary materially with the class of stock involved. Preferred dividends are usually paid quarterly—occasionally semiannually—and are in general declared with greater regularity than common dividends. The passing of a dividend on non-cumulative preferred stock does not give rise to an arrearage unless the dividend was earned, either in the current period or earlier. Further, even where income exists in adequate amount failure to appropriate the regular dividend should not be construed as a violation of the obligation to the preferred stockholders if the disbursement is not warranted by the condition of the company in the well-considered judgment of the board of directors. Passed dividends on cumulative preferred stock represent arrears but cannot be construed as a definite liability. Moreover, such dividends will continue to remain unpaid unless earned, although the amount of the arrearage may eventually become so great as to bring about reorganization (and settlement of the arrearage in some fashion in the reorganization procedure). The authority of the board to pass dividends on cumulative preferred in the presence of actual earnings can presumably be challenged if dividends are unreasonably withheld, as the amount in arrears commonly bears no interest and indefinite withholding would be decidedly unfair to the preferred stockholders. Accountants usually recommend that the full amount of the arrearage be reported by means of footnote or supplementary comment, and there is something to be said for an earmarking of a portion or all of retained earnings (where present) as a "reserve for preferred dividends."

Earnings Accumulation. In the past the accumulation of earnings on a large scale has been a feature of the financial administration of many corporations. An important factor in bringing this about has

been the rapid growth of American business undertakings and the ease of financing such growth through the utilization of earnings. Earnings accumulation also reflects conservative dividend policy and the general desire to strengthen financial position. The significance of past earnings as a basis for dividend appropriations in lean years was discussed earlier. Occasionally earnings are retained in connection with some specific undertaking such as the retirement of a bond issue, the development of a new line of activity, or as a buffer designed to absorb the shock of a particular loss which is feared if not expected.

The "plowing back" of income, it should be pointed out, is not a virtue in itself, and no doubt there are cases in which larger dividends and less expansion would have been more in accord with the best interests of the stockholders than the policy of accumulation followed. An alternative policy is that of disbursing all or most of the amount earned coupled with the offering of subscription rights to stockholders from time to time as additional funds are needed. In this connection it is important to recognize that retained earnings have all of the attributes of invested capital as far as economic and administrative considerations are concerned.

Donations and Capital Transfers. A special means of dealing with a deficit sometimes employed is the contribution by stockholders of a voluntary assessment. The M Co., for example, with outstanding common stock of $1,000,000 (100,000 shares) and 6% cumulative preferred stock of $500,000, par $100, finds itself faced with an accumulated deficit of $200,000 and dividends in arrears (not on the books) of $90,000. At this juncture the stockholders agree to pay an assessment of $4 per share, in cash, for the purpose of absorbing the deficit, meeting back dividends on preferred stock, and providing additional working capital. Assuming the Company is rehabilitated as planned the following entries are in order:

(1)

Cash	$400,000	
Contributions of Shareholders		$400,000
To record collection of voluntary assessment of $4 per share		

(2)

Contributions of Shareholders	90,000	
Preferred Dividends Payable		90,000
To record declaration of back dividends on preferred stock totaling $18 per share		

(3)

Contributions of Shareholders	200,000	
Deficit		200,000
To absorb deficit		

(4)

Contributions of Shareholders	110,000	
Capital Stock Common		110,000
To close balance of temporary account to capital stock		

In this type of adjustment in practice the net increase in the equity of the common stock is often labeled capital "surplus."

Another form of "donation" consists of the return of a portion of the shares outstanding to the corporation. For example, assume that the condition of the M Co. is as described above and that instead of paying in cash pro rata each stockholder "donates" one-half of the number of shares he owns to the Company. Ignoring the fact that to carry out this transaction some arrangement for dealing with fractional shares would presumably be required the conventional entries are:

Capital Stock Common	$500,000	
Deficit		$200,000
Capital "Surplus"		300,000

This transaction, although resulting in a form of "surplus" amounting to $300,000, would not add a penny to working capital or affect the dividend arrearage. It simmers down, in fact, to nothing more than a charging of the deficit to capital coupled with a transfer of an additional amount of stated capital to "surplus" account. The donation is more apparent than real, as the total equity of the common stock is not affected, and there is no additional investment by the shareholders.

The creation of "surplus" by transfer from capital account, whether accomplished by reduction of number of shares or by writing down the capital value per share, is a very questionable financial adjustment. In special cases, as explained earlier, elimination of deficit through a recapitalization may be justified, but it is difficult to find a sound basis for a "window-dressing" that transforms a deficit into a "surplus."

Return to earnings account of "capital" derived from accumulated earnings at an earlier date can be defended as a correction of a previous adjustment that was not wholly justified. There is no defense, however, for a variable policy which amounts to a juggling of capital and earnings accounts.

Capitalization of Earnings. The transfer of accumulated income to capital account may be accomplished by increasing the par or stated value per share, by issuing additional stock, and—in special cases—by absorbing stock discount or original overvaluation through charges to earnings. The device commonly employed, however, is the issue of "dividend" stock. The principal reason for the formal capitalization of earnings is the desire of the management to reflect in the equity accounts the fact that income funds have been used—or are to be used—in financing expansion or in retiring obligations incurred in the development of the business, and to insure their permanent retention in the business. Action in this direction may also be taken for the purpose of increasing marketability of the shares or to permit payment of a larger total of cash dividends without increasing disbursements per share or the rate of dividend to formal capital—not very important ends, and ends that can be effected by the ordinary split-up without disturbing the earnings account. Another possible reason for earnings capitalization is the desire to avoid—in connection with taxation, labor controversies, etc.—the development of opinions as to earning power and its disposition that are likely to be prejudicial to the corporation's interests. The layman is inclined to get the mistaken impression that large accumulated earnings imply excessive income but he generally sees nothing questionable in additional investment.

Significance of Stock "Dividends." The M Co., for example, with an authorized capital of 100,000 shares, par $100 each, of which 50,000 shares are outstanding, has the following status:

Assets	$7,500,000	Capital Stock	$5,000,000
		Retained Earnings . . .	2,500,000
	$7,500,000		$7,500,000

At this point it is decided to capitalize earnings in the amount of $2,000,000 by issuing 20,000 shares of stock pro rata in the form of a "dividend." The general entries, ignoring possible minor complications, are:

Retained Earnings	$2,000,000	
Capital Stock		$2,000,000

No formal entries are required for the act of declaration as a separate

step. At the conclusion of this transaction the Company's position is as follows:

Assets	$7,500,000	Capital Stock	$7,000,000
		Retained Earnings . . .	500,000
	$7,500,000		$7,500,000

This simple example serves to demonstrate the general significance of the stock "dividend" from the standpoint of the issuing corporation. The assets remain unchanged and there is no change in the total equity of the stockholders. The proprietary interest, however, is now represented by 70,000 shares instead of 50,000, and the book value per share has been reduced from $150 to $107.14. Earnings, moreover, have been transferred to capital account in an amount equal to the par value of the additional shares issued. It is this feature—the capitalization of earnings—which constitutes the essential characteristic of the stock dividend as compared with the split-up.

The stock "dividend," clearly, is not a true dividend. There is no assignment or distribution of corporate assets to the stockholders. Far from being a distribution the issue of dividend stock serves notice on the stockholders that a specified amount of earnings has been permanently removed from the dividend reservoir and added to the capital investment. In view of this the use of the phrase "melon-cutting" to describe a stock "dividend" is a bit unreasonable, to put it mildly. An advancing market price for the stock based on nothing more substantial than the prospect of a stock "dividend," or the actual declaration of such a "dividend," is likewise a somewhat surprising phenomenon, although it may be partially explained where the increase in the number of shares outstanding is the forerunner of a policy of making larger cash disbursements. In general the issue of a stock "dividend" can be expected to bring about a proportionate reduction in the prevailing market price per share, as in the case of the straight split-up. If the quoted price of the M Co.'s stock, for example, is $154 per share when a "dividend" of two shares for every five outstanding is declared the market value may be expected to fall to $110 per share when the new stock is actually issued—barring the influence of other developments.

It is true that in the case of highly marketable stock the stockholder can readily sell all or part of the "dividend" shares received and thus realize upon his equity in capitalized earnings—to the extent

afforded by the level of the prevailing prices. The result of such action, however, is not equivalent to the collection of a cash dividend, as the sale of "dividend" shares reduces the stockholder's proportionate interest in the enterprise. To realize in cash precisely the amount of his equity in the capitalized earnings it would also be necessary in most cases for the stockholder to dispose of either more or less than the number of shares received as a "dividend." Further, if a stockholder wishes to "declare his own dividend" by disposing of a portion of his holding he can do this without any assistance from the corporation (assuming that he holds a number of shares). A, for example, who holds 100 shares of the stock of M Co. with a market value of $154 per share, sells 26 shares just before the declaration of a 40% stock "dividend," thus realizing $4,004 in cash, approximately the book value of his equity in the earnings to be capitalized. Shortly thereafter he receives a "dividend" of 29.6 shares, which gives him a total holding of old and new stock of 103.6 shares with a market value, at $110 per share, of $11,396 (assuming that fractional warrants are salable on the same basis as full shares). He then buys a fractional warrant for 4/10 of a share at a cost of $44, which increases his holding to 104 shares worth $11,440. B, another stockholder with an original holding of 100 shares, sells no stock until after the "dividend" shares are issued and accordingly receives 40 shares. He then sells 36 shares, realizing $3,960, and retains 104 shares with a market value of $11,440. The two stockholders are now in precisely the same position and each has secured the same net amount in cash.

Stock "Dividend" Procedure. The declaration of a stock "dividend" is possible only where authorized shares are available. Either common or preferred shares may be employed, although the use of preferred stock for "dividend" purposes is unusual. Under the typical procedure stockholders are permitted to retain their old certificates and additional certificates are issued pro rata to give effect to the "dividend." The issue of fractional warrants is generally unavoidable, and it may be advisable for the issuing company to provide means to facilitate their utilization. Fractional shares have no voting power or dividend rights and usually lapse after a specified date. The amount of warrants outstanding on the expiration date should be returned to the earnings account.

For example, the M Co., with authorized capital of 1,000,000

shares and $10,000,000, of which 250,000 shares with a par of $2,500,000 are unissued, issues a stock "dividend" of $1,000,000 represented by 100,000 shares. The individual holdings of shares are such that the distribution of the "dividend" requires the issue of certificates for 97,000 full shares and fractional warrants aggregating 3,000 shares. The resolution of the directors provides that fractional certificates are redeemable in cash by the corporation for a period of thirty days at the rate of $10 per full share, and may be acquired by stockholders on the same basis. The resolution also provides that part-share rights expire unless presented for redemption or exchange within thirty days from date of issue. Under this arrangement the Company redeems warrants amounting to 1,600 shares and reissues warrants for the account of stockholders totaling 1,375 shares. Certificates for 2,750 full shares are issued in exchange for fractional rights, and those held by the Company (equal to 225 shares) plus those remaining in the hands of stockholders (equal to 25 shares) are canceled. The necessary entries are:

(1)

Retained Earnings	$1,000,000	
Capital Stock		$970,000
Stock Warrants Issued		30,000
To summarize distribution of certificates and fractional warrants per holdings shown by stock ledger of record date		

(2)

Stock Warrants Issued	16,000	
Bank		16,000
To record acquisition of warrants presented for redemption		

(3)

Cash	13,750	
Stock Warrants Issued		13,750
To record reissue of warrants to stockholders		

(4)

Stock Warrants Issued	27,500	
Capital Stock		27,500
To record issue of stock certificates in exchange for matched warrants presented		

(5)

Stock Warrants Issued	250	
Retained Earnings		250
To return redemption value of lapsed warrants to earnings account		

The net result of the entire transaction is the issue of dividend stock amounting to 99,750 shares, the disbursement of $2,250 in cash, and

the return to retained earnings of $250, the amount of the original appropriation attaching to warrants that stockholders have permitted to lapse.

"Dividends" in No-Par Stock. The principal question arising in connection with the issue of "dividends" in shares without par value concerns the amount of earnings to be capitalized per share. What is the proper basis: declared or stated value per share, average paid-in value, market value, total book value, or some other figure? If the capital account is to be defined in terms of stated value per share it seems reasonable to use this amount as a measure of capitalized earnings when dividend stock is issued. For example, if the S Co. has outstanding 800,000 shares of no-par stock with a stated value of $20 per share and 100,000 shares of stock of the same class are issued as a "dividend," the indicated charge to retained earnings is $2,000,000. This treatment may be objected to, however, on the ground that stated value is often a nominal figure much less than total paid-in value and that the latter is therefore the true measure of capital. From this standpoint the stock "dividend" of the S Co.—assuming a paid-in value of $50 per share—represents a charge to retained earnings of $5,000,000 and should be recorded as follows:

Retained Earnings	$5,000,000	
Capital Stock—Stated Value		$2,000,000
Capital Stock—Paid-In "Surplus"		3,000,000

This, on the whole, is the preferable treatment, and can be defended for par "dividend" stock as well as for no-par shares.

Neither market price per share nor total book value per share represents a proper basis for the charge to retained earnings, as both include the value of the very earnings under consideration. Since a stock "dividend," in other words, consists of a formal transfer of earnings to capital account, it is necessary to distinguish sharply between the two main sections of the stock equity in measuring and recording the amount capitalized. The adoption of an arbitrary value, set by the board of directors, is likewise objectionable, and the use of the label "dividend" where stock is issued with no accompanying capitalization of earnings is clearly improper.

In numerous cases "dividends" in no-par stock have been based upon capital "surplus" in whole or in part. This is another practice that does not deserve support. There is no objection to the amalgamation of paid-in "surplus" and stated capital—quite the contrary.

But the use of the phrase stock "dividend"—if it is to have any proper application—should be restricted to situations in which the issue of "dividend" shares has the capitalization of earnings as its essential purpose.

Reservation of Earnings. The practice of earmarking retained earnings under special heads for the purpose of reflecting particular policies, programs, conditions, or contingencies, represents a method of impounding or appropriating income without formal capitalization. The importance of the practice can easily be exaggerated, as unappropriated earnings may be viewed as a sort of general-purpose buffer or reserve. Reservations of earnings are not to be encouraged, moreover, merely for the purpose of obscuring the condition of the enterprise with respect to accumulated income, or to make possible a resurrection of buried income when current conditions are unfavorable and those in control wish to keep up appearances. At the same time no serious objection can be offered to well-considered and systematic subdivision of the retained earnings account, under captions and presentations which are not open to misunderstanding, and such subdivision may furnish some illumination and may be of some slight advantage from the standpoint of financial administration.

True earnings reserves should be distinguished from other types of accounts to which the term "reserve" is—unfortunately—applied. A reserve of earnings is a section of the stock equity, and its character is not affected by the bare act of earmarking or appropriating. The nature of a reserve account may of course be altered as a result of events and developments following its establishment.

Even as applied to retained earnings the use of the term "reserve" is subject to misunderstanding and in general it would be helpful if the expression were avoided in account titles and statements.

Earnings Invested in Plant. Earnings may be earmarked as a reserve for extensions or improvements either for the purpose of reflecting in the accounts the intention to restrict dividends and use the funds available for plant expenditures or to show that earnings have already been invested in fixed assets and hence are not free for distribution to shareholders. The M Co., for example, earns a net income in a particular year of $5,000,000, but throughout the year the need for additional equipment and other facilities is such that all liquid resources in excess of working capital requirements are expended as

fast as they become available to meet bills incurred in connection with the acquisition of machinery and in new construction. At the end of the year the directors decide to give effect to the situation in the presentation of the stock equity by authorizing an appropriation of earnings in the amount of $4,500,000 under the caption "earnings invested in plant additions." (The title prescribed in railway accounting is "reserve for additions and betterments.") The entries necessary to record this authorization are:

Retained Earnings.	$4,500,000	
Earnings Invested in Plant Additions. . . .		$4,500,000

This action, it should be understood, does not in itself involve any expenditure of funds and has no effect upon the plant account. It consists simply of a segregation of earnings under a special heading.

A reservation of earnings to indicate that the funds made available through profitable operations have been applied to plant expansion rather than to an accumulation of liquid assets does not diminish the amount of the legally-available dividend reservoir, and if and when the cash position warrants there is no objection to basing a dividend declaration upon earnings drawn from the special account. Earnings invested in plant, in other words, need not be viewed as a permanent appropriation. The return of all or any portion of such a reserve to unappropriated earnings, however, should be clearly reported in the periodic statements affected. There is something to be said in this connection for a systematic reversal of the appropriation entries in terms of the schedule of plant depreciation. Assume, for example, that the amount of depreciation annually charged to operation by the M Co. on a plant cost of $4,500,000 approximates $360,000. In this situation it would not be unreasonable to adjust the reserve each year as follows:

Earnings Invested in Plant Additions	$360,000	
Retained Earnings.		$360,000

On the other hand, if the funds liberated through the conversion of fixed assets are to be reinvested in plant at an early date the transfer from the reserve to unappropriated earnings would hardly be in order.

Security Retirement Reserves. The contract with the holders of bonds or other senior security may place restrictions on dividends to

common stockholders, and the earmarking of accumulated earnings in conformity with such restrictions is often desirable even if not required. The M Co., for example, issues five-year notes amounting to \$1,000,000 under an agreement which provides that 75% of all income funds available for the common stock must be retained and applied to the retirement of notes, or to the accumulation of a retirement fund, until the entire issue has been redeemed or provided for. The net income for the first year amounts to \$400,000 and earnings are accordingly appropriated in the amount of \$300,000. The entries are as follows:

Retained Earnings	\$300,000	
Earnings Reserved for Note Retirement . . .		\$300,000

To give full effect to the agreement a corresponding amount of cash must be deposited in a special account, presumably under a trusteeship, to be devoted immediately or later to note redemption. This process is continued until all notes have been paid, or funds sufficient to complete payment have been accumulated. The reserved earnings then become unrestricted, and may be returned to the main earnings account, thus:

Earnings Reserved for Note Retirement. . . .	\$1,000,000	
Retained Earnings		\$1,000,000

Or it may be decided to segregate this section of earnings, which corresponds to the income funds that have been utilized in reducing liabilities—in "buying out" the equity of the noteholders, under another special heading, as follows:

Earnings Reserved for Note Retirement. . . .	\$1,000,000	
Earnings Applied to Reduction of Liabilities .		\$1,000,000

Care must be taken to distinguish between a subdivision of earnings established in connection with a program of security retirement and a fund of cash or other liquid resources accumulated for the purpose of redeeming outstanding obligations. The amount of retained earnings is not affected by the process of retirement (ignoring the adjustments which arise where the expenditures on account of retirement are more or less than the book value of the security eliminated), whereas the fund is entirely or largely absorbed by the payments made.

In some states the corporation law provides that outstanding shares can be acquired for the "treasury" only to the extent that the amount so expended does not exceed the accumulated earnings. The purpose of such statutes, presumably, is to prevent a decrease of the stock equity below the level of the original formal capital, and earnings to the amount expended for treasury shares must accordingly be assumed to be restricted and not available for dividends. The R Co., for example, with accumulated earnings of $1,000,000, expends $700,000 in acquiring outstanding shares. To reflect the impounding of earnings as a result of this action the following entries are desirable:

Retained Earnings	$700,000	
Earnings Restricted by Acquisition of Capital Stock		$700,000

Reducing retained earnings by the amount expended for treasury shares, a procedure that has been recommended in some quarters, is neither necessary nor proper. The amount paid to the retiring shareholders represents an offset to par or stated value and paid-in "surplus," if any, to the extent of the applicable amounts appearing in the capital accounts, and the balance constitutes an actual or potential offset to retained earnings (with a possible special adjustment of the stock equity—or of asset values—emerging, as explained in the preceding chapter). If the amount paid for shares acquired is deducted in full from accumulated earnings the result is a definite misstatement of both main divisions of the stock equity. This becomes very apparent if action is taken to bring about a formal reduction of capital and cancellation of the acquired shares.

Reservations of earnings not required by contract or statute are sometimes made by the management as a means of reflecting restriction of dividends and intention to retire preferred stock or other securities out of income funds.

Contingency Reserves. A section of retained earnings is sometimes earmarked to cover the estimated amount of the loss which may result from some particular undertaking, transaction, or condition in which asset values are jeopardized to an unusual degree. Thus a reserve may be established equivalent to the investment made in a foreign branch, in the face of disturbed political conditions, or the cost of experimental equipment, or the amount of any other highly speculative commitment. Another example is found in the reserve

for possible or probable decline in inventory prices or the value of securities owned. Possible losses from suits, strikes, unfavorable legislation, etc. are also sometimes reflected in the accounts through special earnings appropriations. In this connection, however, care must be taken to distinguish between accounts representing losses which can reasonably be accrued on the basis of known conditions, and which must not be interpreted as a part of the stock equity, and reserves for pure contingencies.

The practice of appropriating earnings in the form of one or more possible loss reserves should not be carried to extremes. Reservations which are nothing more than gestures in the direction of conservatism are more likely to obscure than to illuminate and are to be avoided. The accumulation of a general earnings buffer, without the use of fancy labels, is sufficient indication of conservative policy except in situations where a definite basis for anxiety exists.

A reserve for fire loss or other casualty, growing out of a program of so-called "self-insurance," should generally be interpreted as a part of retained earnings, even where established by charges to revenue. There is no such thing as self-insurance in any proper sense. Certain risks can be shifted by paying insurance premiums; the alternative is to take the chance of loss and not insure—a policy that may be good management under some conditions. However, fire losses and other casualty losses do not accrue, and the passage of time without losses does not bring about a condition of greater jeopardy for the particular asset or the particular concern. This is very apparent when sale of an entire business is being considered; the vendor would certainly vigorously reject the view that an amount should be deducted from the value of existing assets to reflect the fact that fire and other casualties were statistically overdue. It follows that it is not good accounting to include in expenses an amount in lieu of insurance premium when no insurance is being carried.

Non-Proprietary Reserves. The term "reserve," unfortunately, is used rather indiscriminately in accounting practice. Liabilities are often designated as reserves, especially where circumstances are such that the amount of the obligation must be estimated or the parties to whom payment must be made have not been definitely determined. Thus "reserve for Federal taxes" represents the amount of tax estimated to be accrued where the actual assessment is uncertain due to belated legislative action, difficulty of interpreting existing laws and

regulations, or questions of constitutionality; "reserve for improvements on property sold" is the estimated liability to buyers to furnish improvements as provided in sales agreements; "reserve for guaranties" measures the estimated cost under guaranties given to service and repair equipment already delivered to customers; "reserve for injuries and damages" expresses the estimated expenditures which must be made on account of pending claims of employees or others. Liabilities of the "deferred-revenue" type—the amounts of which are definitely known—are likewise often called reserves. Examples are "reserve for outstanding tickets," in the milk business, "reserve for receipts on unfilled orders," in the mail-order field, "reserve for unearned subscriptions," in magazine publishing, and the "reserve for premiums" of an insurance company. In all of these cases the misleading term "reserve" should be dropped and titles should be employed that make it plain that the liability arises out of cash advances by customers.

The only excuse for attaching the term "reserve" to liabilities for unclaimed wages, dividends, etc. is the fact that some of the claims may never be presented for payment. For ordinary accruals of wages, royalties, interest, etc. the designation "reserve" is entirely uncalled for.

Accounts showing estimated accrued depreciation, depletion, and amortization, still commonly labeled as "reserves," represent offsets to recorded property costs or values rather than retained earnings as has been emphasized in other connections, and should never be reported in combination with accumulated income balances. The use of the term "reserve" in this connection is particularly objectionable as it no doubt is in part responsible for the persistent tendency to interpret contra valuation accounts as representing accumulated funds. It is true that earnings and valuation reserves overlap in practice to the extent that accruals of depreciation, etc. are either overstated or understated, but this simply means that the accuracy of reported earnings depends on the accuracy of the accounting for charges to revenues and has nothing to do with the use of contra accounts in booking such charges.

Both short-term and long-term "equalization reserves" may be difficult to interpret for statement purposes. A reserve for estimated plant removal cost, where no net salvage value is expected, is usually combined with the depreciation allowance as an offset to the gross book value, although such cost does not literally represent an expira-

tion of recorded value as does accrued depreciation. An operating reserve used in allocating to particular months annual expenditures for advertising, for example, may have either a debit or credit balance at particular points, and while a debit balance can be interpreted as a form of prepayment it seems a bit far-fetched to view a credit balance either as an offset to working capital or as a liability. A reserve established by charges to revenues during war years to cover estimated costs of reconverting to peacetime operation, under the theory that wartime revenues are chargeable with the roundtrip costs of going on a war basis, is a non-proprietary account—offsetting total current assets—if based on reasonable estimates of expenses to be incurred. In practice, however, such accounts have often represented retained earnings for the most part. The reserve for collection expense is a more commonplace example of an account set up to provide for the accrual of "after" costs.

Secret Reserves. A "secret reserve" is an element of the proprietary equity which is either completely suppressed or is not reported as such. Such reserves result from such practices as failure to capitalize particular plant assets, charging additions and improvements to maintenance, overstatement of bad debts, setting up excessive depreciation or depletion, omission of accrued revenues and receivables, understatement or omission of inventories or prepayments, and overstatement of liabilities. Where due to a recognized accounting procedure consistently employed, a secret reserve is a technical matter and may not be seriously objectionable. On the other hand deliberate understatement of assets and the stock equity, with the intention of misleading or impairing the rights of any parties at interest, can not be too strongly condemned.

Questions

1. State the principal types of dividends. What is the test to be applied in distinguishing between nominal and true dividends?

2. Discuss the source of dividend appropriations from the legal standpoint.

3. A corporation with accumulated earnings of $5,000,000 of which the amount of $1,000,000 was earned prior to March 1, 1913, declared a cash dividend of $1,000,000 "payable out of profits earned before March 1, 1913." Comment.

4. State and explain the factors which should be contemplated by the board of directors meeting to consider dividend action. Should the class of stock influence the decision? The origin of earnings?

5. "The operations of your company resulted in a loss for the year of $20,000,000. Nevertheless dividends were declared and disbursed amounting to $15,000,000,

such action being made possible by the policy of accumulating earnings in earlier years." Discuss fully.

6. When, if ever, are scrip dividends justified?

7. "Disbursing dividends based on current profits that are not sufficient to wipe out an accumulated deficit amounts to the payment of dividends out of capital funds." Discuss.

8. Under what circumstances can the practice of recapitalizing to absorb past losses be justified?

9. Must the declaration of dividends await an accumulation of earnings in excess of discount on stock or initial overvaluation?

10. What three dates are usually involved in a dividend declaration? Should quarterly dividends for several years be declared in advance? When does a stock become "ex-dividend"? Outline, with illustrative entries, the dividend procedure for a large company with many stockholders.

11. When are dividends in arrears on non-cumulative preferred stock? On cumulative preferred? How should dividend arrearages be reported?

12. Explain and compare two alternate policies of expanding a business through the acquisition and use of funds provided—directly or indirectly—by the stockholders.

13. With illustrative entries show how pro-rata contributions by shareholders to absorb a deficit should be recorded. How should contributions by one or more stockholders, not in proportion to holdings, be handled?

14. "In some cases an apparent donation amounts to nothing more than a transfer from the capital account to 'surplus'." Explain and illustrate.

15. How may earnings be capitalized? Indicate the principal reasons for such capitalization and the merits of each.

16. What is the effect of the *declaration* of a stock dividend upon: (1) total book value; (2) market price per share; (3) retained earnings; (4) the proportionate equity of each shareholder? Answer same questions substituting *issue* for *declaration*.

17. With an illustration show how a stockholder may "declare his own dividend."

18. Discuss stock dividend procedure, including specific attention to the treatment of warrants for fractional shares.

19. What amount per share should be charged to earnings when a dividend is issued in no-par stock? Explain fully.

20. What are earnings reserves? Is their use, when not required by contract, justified?

21. With entries illustrate the use of a special account for earnings invested in plant. Is such an earmarked section of earnings available for dividends?

22. Discuss the use of security retirement reserves. Should such a reserve be returned to unappropriated earnings when the security in question has been redeemed?

23. "Where the controlling statute limits the amount to be expended in acquiring outstanding stock to the accumulated earnings, the amount expended to acquire shares should be deducted from retained earnings." Do you agree? Explain.

24. Under what circumstances are contingent loss reserves unobjectionable?

25. Discuss the interpretation of a reserve for fire loss. Illustrate the use of liability reserves, valuation reserves, equalization reserves.

26. Define "secret reserve". Discuss the origin and use of such reserves.

XXXVIII

CORPORATION BONDS

Corporate Fixed Liabilities. The long-term liabilities—the "funded debt"—of corporate enterprises are commonly in the form of bonds or notes. Such securities have been issued in large amounts by railways, other utility enterprises, and real estate concerns, and have also been employed in manufacturing, trading, and other lines. Mortgage bonds and notes, based upon some form of mortgage and embracing the provisions of the underlying instrument, represent liens upon land, buildings, and other types of tangible property. Collateral bonds are issues secured through trusteed deposit, by the issuer, of other securities. Debenture bonds are issues based upon the general credit of the issuing organization and rank with other unsecured claims. Bonds, like stocks, are sometimes convertible. Income bonds—bonds on which interest is payable only if earned—have not been popular with investors and are now seldom employed, even in reorganizations. The bonds of a particular issue may be divided into (1) registered bonds, recorded in the name of the holder and on which interest and principal are paid upon the initiative of the issuer or its agent, and (2) coupon bonds, not recorded in the name of any party and on which interest and principal are payable to bearer (the interest rights being represented by a series of detachable coupons).

Funds received from bond and note issues are usually invested in plant assets or are used to retire similar securities. Occasionally a portion of an embarrassing floating debt is funded for a period of years. Interest is usually payable semiannually, and payment may be effected directly or through a specified agent. In most cases the borrowing corporation reserves the right to call for redemption any

or all of its outstanding obligations at stated prices, usually one to five points above maturity amount. Retirement of particular blocks prior to maturity may also occur as a result of acquisitions by the corporation on the open market or through special negotiations. Sinking-fund arrangements of various kinds are often employed in connection with the program of debt payment.

Although not a part of the proprietary equity the outstanding funded debt of a corporation may be viewed as an element of the capital structure, broadly interpreted. This is especially true in the railway and public-utility fields where commonly fifty per cent or more of all money employed is secured through bond and note issues that are replaced by similar securities as the earlier issues mature. Bonds that are freely convertible into stock represent potential proprietary capital. Bondholders and other creditors usually have only a very limited influence on the immediate management of the enterprise.

Issuing and Recording. The first step is the formal authorizing of the issue, including decision as to amount, security, term, and rate of interest, and this may require a special meeting of stockholders. The second step, in the typical situation, is the undertaking of negotiations with investment houses to arrange for the disposition of all or a portion of the authorized issue. When a suitable proposal has been received and approved by the board of directors a definite underwriting agreement is entered into between the investment bankers and the corporation. Such agreement may amount to a contract under which the bankers acquire the security on their own account for a stated amount, or it may represent merely an arrangement by which the bankers undertake to manage the distribution of the issue at a price and for a commission mutually agreed upon. All necessary legal details associated with the issue must be worked out, and the bonds or notes must be printed and signed by corporate officials and the designated trustee. The final step consists of the delivery of the securities to the underwriter and the receipt of the money by the corporation.

The records and entries required in connection with the issue of bonds or long-term notes are similar to those employed in issuing capital stock. Formal ledger entries covering the authorization are not necessary but are sometimes used as a means of general control. The following is illustrative:

Unissued Bonds	$1,000,000	
First Mortgage 4% Bonds Authorized . . .		$1,000,000

Assuming the bonds are issued directly to an investment house or group the journal entries, in summary, are as follows:

(1)

Investment Company	$1,000,000	
Unissued Bonds		$1,000,000
To record delivery of bonds		

(2)

Cash	1,000,000	
Investment Company		1,000,000
To record receipt of investor's check		

(3)

First Mortgage 4% Bonds Authorized	1,000,000	
First Mortgage 4% Bonds Outstanding . . .		1,000,000
To recognize change in status of bonds		

If the memorandum authorization entries are not made the credit to unissued bonds in the foregoing is replaced by a credit to bonds outstanding and entries numbered (3) are omitted. Where the bonds are delivered in blocks and the money is likewise received in installments the entries required are correspondingly extended.

If the underwriting firm or syndicate acts merely as the agent of the corporation in taking and collecting subscriptions, and the subscriptions are accordingly accounted for on the issuer's books, the entries (omitting the possible authorization entries) take a form somewhat as follows:

(1)

Bond Subscriptions	$1,000,000	
(also individual accounts)		
First Mortgage 4% Bonds Subscribed . . .		$1,000,000
To record subscriptions as reported by underwriters		

(2)

Underwriters	1,000,000	
Bond Subscriptions		1,000,000
(also individual accounts)		
To record collection of subscriptions by underwriters		

(3)

Cash	1,000,000	
Underwriters		1,000,000
To record receipt of collections from underwriters		

(4)

First Mortgage 4% Bonds Subscribed	1,000,000	
First Mortgage 4% Bonds Outstanding		1,000,000
To record delivery of bonds to cover paid subscriptions		

Entries would also be necessary to cover the accruing liability to underwriters for services rendered and the discharge of such liability.

Subscriptions taken and collected directly by the issuing company are recorded as shown above, omitting the account with the underwriters. Where individual subscriptions are payable in installments, the amount is sometimes distributed in a series of installment accounts for the purpose in particular of segregating amounts overdue.

Bond subscriptions, to the extent that they represent claims against responsible parties, are a type of receivable and may be reported as an asset. The amount should be segregated on the position statement, however, and should not be included in current assets where the use of the funds as received is definitely restricted to investment in fixed assets or refunding of outstanding long-term securities. Moreover, bond subscriptions like stock subscriptions are peculiar in that they represent funds in the process of being raised rather than claims resulting from the furnishing of valuable considerations, and in view of this some accountants prefer to report the balance of unpaid subscriptions as a contra to bonds subscribed.

The amount of authorized bonds not covered by subscriptions may be reported in the position statement parenthetically, or by means of a footnote.

In the case of registered bonds a bond ledger containing the accounts of the individual holders must be maintained by the corporation.

Bond Discount. One of the least excusable of the standard practices of accounting is that which treats the discount arising where bonds are issued at less than maturity value as an asset related to such current balances as unexpired insurance and prepaid rent. Unaccumulated discount on a bond or similar security is in no sense an asset to the issuer, but represents an element of the total "interest" charged during the life of the contract. The discount is the difference between the amount of the actual capital received or invested and the par value—the amount payable or collectible at maturity. It is not a prepayment of cost by the borrower or income received in advance by the investor; it is rather that portion of the effective interest which remains unpaid and uncollected until the due date of the security.

From the standpoint of the issuing corporation the matter resolves itself into the question: what is the true liability of the borrower, at

the outset and during the term of the security, when the amount received from the investor is less than the maturity value? This question can best be answered by consideration, in turn, of the possible measures of the original liability. These are:

1. Total amount payable, interest and principal, under the terms of the contract.
2. Amount due at maturity.
3. Actual amount received or invested.

Assume, for example, that a company issues a twenty-year bond, agreeing to pay the investor $20 every six months through the life of the security and $1,000 twenty years from date of issue, and receives therefor $935 in cash. In this case, evidently, the corporation obligates itself to pay a total of $1,800, and in a very real sense the liability assumed is actually this amount. The borrowing enterprise promises to pay the annuity of $20 just as explicity as it promises to pay the maturity value, and all of the annuity installments become due and payable in full before the maturity date. At the same time it is equally clear that this total liability is not the true liability to be recognized in the accounts at the date of issue. To set up $1,800 as the initial liability, with a discount or deficit of $865, would imply that the borrower were willing to become immediately obligated for $1,800 although receiving only $935, an obviously ridiculous interpretation of an ordinary commercial transaction between two parties who may be assumed to be in good financial standing and equally desirous of reaching an agreement. Such a treatment, further, would be unreasonable in that it would ignore the earning power of the funds received. Indeed the borrower is not justified in entering into such an arrangement unless the amount received for the bond, $935, can be expected to produce a net return of at least $865 during the twenty-year period.

Adoption of the second alternative—the usual practice—is likewise seriously objectionable. If the immediately effective liability for accounting purposes is $1,000, the maturity value, it follows that the difference between this amount and the sum received, $65, is either an outright loss or an asset. To hold that the discount is a loss is untenable. The corporation willingly accepts the terms, and sees in the transaction an equitable arrangement in no way involving a dissipation of assets or any form of deficit. It is equally difficult to accept the theory that the discount is an asset. Discount is the *difference* between the money or other property received for the bond

and the maturity value; it is not an *addition* to the money or other property. In fact to hold that discount is a true asset is tantamount to insisting that the actual resources or property received must invariably total the maturity value of the security, regardless of the price at which issued—a position which denies the existence of discount, the phenomenon under consideration! To argue as some seem to do that discount is neither a loss nor an asset but a "deferred charge" to operation or to income simply begs the question; the legitimate deferred charge is nothing more or less than a cost factor properly applicable to future activities.

The third alternative is the only one that is fully acceptable. The effective liability at the outset is the actual amount received from the investor. This conclusion is obviously reasonable; in a commonplace and supposedly equitable transaction it is to be expected that the immediate obligation incurred by the borrower will be neither more nor less than the amount of money or equivalent obtained. It also leads directly to a sound program of discount accumulation. The liability to begin with is the amount received, $935; the liability at maturity is clearly $1,000; the difference is made up through the systematic accumulation of the discount, $65, by adjustment of periodic interest charges through the application of the yield rate implicit in the terms of the loan. At all interim points the liability is the sum of the original obligation and the accumulation to date of that portion of the interest element which is retained until maturity. This treatment involves no padding of assets or charging off of fanciful losses.

It may be objected that the true legal liability is the face or maturity value since this amount becomes due and payable immediately in the event of default. This point may be met in some measure by calling attention to the view, generally accepted, which holds that accounting principles and procedures should be developed primarily from the standpoint of the going concern rather than that of the insolvent or liquidating enterprise. Moreover, the adoption of the interpretation just outlined does not prevent disclosure on the face of the position statement, with any degree of prominence desired, of the maturity value of the obligation, with the amount of the unaccumulated discount shown as a contra.

Bond Premium. The foregoing discussion can be readily adapted to the case where bonds are issued at a premium—at a price, that is, in

excess of par or maturity value. The true liability at date of issue is again the amount paid by the bond buyer, the investor. Assuming that the convention of displaying face value in the principal liability account is adhered to the amount of the premium must be recorded in a supplementary account, and in the statement this special account should be reported as a part of the total liability, thus:

First Mortgage 4% Bonds:	
Amount due at maturity	\$1,000,000
Unamortized premium	71,486
Total amount of liability	\$1,071,486

The premium account shows that part of the original liability which is returned to the investor in the guise of periodic "interest" payments, and the discharge of this portion of the obligation is recognized by debiting the account each period with the excess of the nominal interest over the true interest calculated at the yield rate. At date of maturity the amortization of premium has been completed and the liability stands at the amount then due, the face value.

In practice the error is sometimes made of absorbing bond premium in the income account at the date of issue. This is definitely objectionable. Issuing bonds at a premium certainly does not give rise to income to the borrower. The investor pays the premium with his eyes open and is in no sense making a donation to the issuing corporation; he expects to be repaid in full during the life of the security. Crediting premium to earnings on the corporation's books results in an understatement of liabilities and overstatement of stockholders' equity, followed by a periodic understatement of net income due to the inclusion in interest charges of premium amortization.

The treatment of bond premium as a "deferred revenue" that is gradually "earned" through the term of the bond is also inaccurate. The premium—a portion of the funds contributed by the bondholder—is not an income to the borrowing company at any stage. It is true that charging interest with the full amount of the periodic payment and including in income the amount of premium amortized does not distort the final net figure, but it does involve padding of both sides of the income account and hence is improper. The sound procedure is to charge the amount of "interest" representing amortization directly to the premium account as a clear-cut reduction of the total liability.

Recording Bonds Issued at Discount and Premium. On the investor's books it is good practice to charge the investment account with the actual cost of the security, disregarding par or maturity values. On the corporation's books, however, the practice of recording face value in the main liability account is universally followed and is not objectionable provided the proper supplementary accounts are introduced and the facts are correctly reported in the statements.

The M Co., to illustrate, issues first-mortage, 5% bonds in the maturity amount of $1,000,000, receiving cash from investors totaling $950,000. Assuming that subscriptions are involved but that unissued bonds are not recognized in the accounts the required entries may be outlined as follows:

(1)

Bond Subscriptions (also individual accounts)	$ 950,000	
Discount on Bond Subscriptions	50,000	
First Mortgage 5% Bonds Subscribed (Maturity Value)		$1,000,000
To record taking of subscriptions		

(2)

Cash	950,000	
Bond Subscriptions (also individual accounts)		950,000
To record collection of subscriptions		

(3)

First Mortgage 5% Bonds Subscribed (Maturity Value)	1,000,000	
First Mortgage 5% Bonds Outstanding (Maturity Value)		1,000,000
To record issue and delivery of bonds		

(4)

First Mortgage 5% Bonds Outstanding (Discount)	50,000	
Discount on Bond Subscriptions		50,000
To close temporary discount account		

The use of matched titles for par value and discount is helpful in that it emphasizes the relationship between the two elements and discourages improper interpretation later.

Assuming that the M Co.'s bonds are issued at a premium of $50,000, and ignoring subscriptions, the summarized entries are:

Cash	$1,050,000	
First Mortgage 5% Bonds Outstanding (Maturity Value)		$1,000,000
First Mortgage 5% Bonds Outstanding (Premium)		50,000

In the subsidiary accounts of registered holders it is convenient to use par values only, which means that control is secured through the main liability account in the general ledger without reference to the supplementary discount or premium account. To facilitate reconciliation of the underlying bond ledger and the controlling account it is well to use a separate account in the general ledger to show the par value of the coupon bonds of the same issue which are outstanding. The discount or premium account need not be allocated, however, as it is not considered necessary to distinguish between coupon and registered bonds in the financial statements.

Financing Cost versus Discount. It is common practice to lump actual discount with the legal fees, printing costs, underwriting commissions, and other charges associated with the issuing of bonds, but this is not good accounting. The various service costs that must be incurred in raising capital represent a genuine asset (not a money fund but a legitimate cost factor) and should be dealt with accordingly. In the case of such costs incurred in issuing a terminable security it is reasonable to assume that their significance expires during the life of the security, and complete amortization in this period is therefore indicated. (The fact that a portion of such costs might have a long-run effect on intangible assets, as the concern becomes established and financing costs fall, can be ignored.) The amount of the periodic expiration should be charged to revenue as a general financial expense. As a rule a straight-line scheduling of amortization is satisfactory.

For example, the M Co. incurs costs of $30,000 in issuing twenty-year bonds. The entries recognizing such costs, in summary, are:

Bond Issue Costs	$30,000	
Cash (or equivalent)		$30,000

The entries covering amortization for one year are:

Amortization of Bond Issue Costs	$1,500	
Bond Issue Costs		$1,500

The captions used may of course be modified in various ways. Often it is advisable to show such costs in the ledger broken up into the component elements of legal cost, commissions, etc.

Where securities are issued to those furnishing legal and other

services the value of the services may be uncertain and may be more or less than the nominal value of the securities issued. In all such cases an effort should be made to find the fair value of the services received and such value should be the basis of the accounting.

The distinction between the cost of raising capital—the amount actually paid for services rendered—and true discount—the excess of maturity value over the amount paid by the original buyer—is sometimes obscured by the complexity of the conditions under which the security is issued. The general rule should be that the discount is determined by comparing the amount paid by the first investor—the party who actually furnishes the funds and is the first full-fledged holder of the security—with par value; the records of the issuing company are not affected by transfers from one party to another. In this connection caution must be exercised in interpreting the phrase "net proceeds" in connection with a security issue. The actual proceeds consist of the full amount paid in by the original investors, and the funds so received are available for all proper corporate purposes. The payment for services rendered by investment bankers, like any other commitment, represents one *application* of the funds received, not a *reduction* in the amount of such funds.

Issuing Bonds Between Interest Dates. The M Co., for example, prepares first mortgage, 6% bonds in the amount of $1,000,000, par, dated January 1, but does not issue the bonds until January 15, at that time receiving par and accrued interest. The entries summarizing the transaction are:

Cash	$1,002,500	
First Mortgage 6% Bonds Outstanding . .		$1,000,000
Bond Interest Accrued Payable		2,500

In this situation the investor advances to the corporation the interest accrued from formal date to date of issue, $2,500. This amount, however, must be returned to the bondholder on the first interest date as a part of the total due at that time, and hence is credited to an accrued liability account. On July 1, when the first coupon is paid (and assuming there has been no interim accrual), the entries are:

Bond Interest Charges	$ 27,500	
Bond Interest Accrued Payable	2,500	
Bank		$ 30,000

Bonds are often issued in a number of blocks over a period of

months and where this is the case interest must be appropriately accrued and collected for each lot. Where an issue of coupon bonds is made after one or more interest dates the matured coupon (or coupons) is detached and the interest collected from the buyer is that accruing since the last interest date. Original charges to bond subscription accounts may or may not include an element of accrued interest, depending upon the circumstances, but the subscriber must advance the amount accrued, if any, when making payment.

Interest Procedure. Interest on outstanding bonds, like interest on short-term obligations, must be properly accrued for each accounting period of the issuing corporation, the entries being a debit to interest charges and a credit to an accrued liability account. When payment is made the liability is charged and the bank account is credited. In the case of bonds issued at a discount or premium adjustment must be made for accumulation or amortization. See illustrations later. In any event the amount actually disbursed in each period is the nominal interest as stated in the bond.

Interest may be paid either by the issuing corporation or by the trustee or other designated representative. Where payment is made directly by the corporation checks on the company's bank account (sometimes a special account, established to take care of interest requirements) are mailed to registered holders and coupons as presented are redeemed either by check or in actual currency. Individual holders often turn their coupons over to a local bank or other financial institution for purpose of collection, which means that coupons are assembled in some measure before reaching the corporation and may be taken care of by a relatively small number of separate payments. Complete redemption of all matured coupons is not always accomplished on the due date; often presentation of a few coupons will be delayed for a considerable period. If desired the balance of the accrued liability account representing coupons past due for a month or more may be transferred to a special ledger account. An important feature of interest procedure, not always carefully observed, is the systematic filing of redeemed coupons.

Where payment is made by the trustee the procedure required of the corporation is somewhat simplified. A single check is issued payable to the trustee for the entire semiannual requirement (the necessary amount may of course be accumulated through a series of payments, if desired) and the individual payments are made by the

trustee to registered holders and those presenting coupons. In this situation the amount of interest money deposited with the trustee may be debited directly to the accrued liability account or it may be charged to the trustee, as a part of funds on deposit. The first treatment is somewhat objectionable in that it assumes immediate payment of the entire interest obligation, although the liability is actually retired only as interest funds are disbursed by the trustee. Under the second and preferable treatment the trusteed fund is credited and the interest liability charged only as payments of interest money are reported by the trustee, and the accounts then show the unpaid interest and the deposited funds available for payment. The amount of interest money to be deposited is the interest currently payable as stated in the contract and is unaffected by accumulation or amortization schedules.

Coupons on bonds acquired by the issuing corporation and not formally canceled should be detached and filed as of interest dates, with notations showing their origin. If interest is disbursed by the trustee the holdings in the company treasury and the amount outstanding should be reported by the corporation. Where company bonds are held by the trustee interest payments thereon are sometimes continued as part of a program of sinking-fund accumulation.

Bond Valuation. The value of a bond or similar security consists of two elements: (1) the present value of the sum due at maturity; (2) the present value of the interest annuity. If the yield rate at which the bond can be issued is the same as the nominal rate the sum of these two elements coincides with par or maturity value. For example, if the M Co. offers 4%, twenty-year bonds amounting to $1,000,000, par, with interest payable semiannually, the present worth of the sum due in 40 periods at a rate of 2% per period is $452,890.42, and the present worth of an annuity of $20,000 per period for 40 periods at a rate of 2% is $547,109.58, a total of exactly $1,000,000. If, however, the market rate is above the nominal rate stated in the bond the sum of the values of the two elements is less than par, and if the market rate is less than the nominal rate a value in excess of par is indicated. A bid for the above bond on a 4½% yield rate (2¼% per period of six months), for example, would amount to $410,645.75 plus $523,870.44, a total of $934,516.19. And a bid on a 3½% basis would be similarly found to amount to $1,071,-

485.57. In practice, it may be added, the discount or premium is seldom as large as in these hypothetical cases.

The calculation of bond values where compound interest tables are not available is a rather lengthy process. The expression for the present value of \$1 due in *n* periods at *i* rate is

$$\frac{1}{(1+i)^n}$$

The expression for the present worth of \$1 per period for *n* periods at *i* rate is

$$\frac{1-\dfrac{1}{(1+i)^n}}{i}$$

The process may be abridged, however, by computing the first of the two components and then deriving the other by simple arithmetical operations. For example, the present value of \$1 due in forty periods at 2¼% per period is

$$\frac{1}{1.0225^{40}}$$

which reduces by computation to .41064575. Multiplying this result by 1,000,000 gives \$410,645.75, the present value at 4½% of the sum due at maturity in the case of the M Co. bond referred to above. But if this bond were a 4½% security it would bring a price of par on a 4½% basis. And since the present worth of the maturity amount at 4½% is \$410,645.75, an interest annuity of 4½%, on a 4½% basis, would be worth par less this amount, or \$589,354.25. The 4% interest annuity offered by the Company is therefore worth only 40/45 of this last figure, or \$523,870.44. The value of the bond, accordingly, is the sum of \$410,645.75 and \$523,870.44, or \$934,516.19.

The total price of a serial bond under specified conditions is found by computing the present value of each block separately.

Estimating Effective Rates. The fact which the bond buyer often wishes to ascertain is the yield rate of interest implicit in the market price of a particular security. For the issuing company likewise a common problem is that of estimating the effective rate where a price has been proposed or agreed upon without previous determination of the rate. In general the most satisfactory method of calcula-

tion is that of averaging coupled with "trial and error." For example, assume that the M Co. issues a block of twenty-year, 4% bonds in the maturity amount of $1,000,000 for $1,149,579.22. What is the true rate of interest involved?

The nominal interest paid per period, $20,000, exceeds the actual interest charge, on the average, by one-fortieth of the premium of $149,579.22, or $3,739.48, and the average charge per interest period is accordingly only $16,260.52. The principal sum at the outset is $1,149,579.22 and at maturity is $1,000,000, and the average of these amounts is $1,074,789.61. Dividing the average interest charged by the apparent average principal gives an initial trial rate per half-year period of approximately 1.513%. The next step is the computation of an informal amortization schedule (see illustration later) for the bond issue for forty periods based on this trial rate—not a very difficult task where a mechanical calculator is available. By this process the trial rate will be found to be too high, and a new trial rate is selected which takes account of the average discrepancy. Through two or three such calculations the correct rate of 1.5% can be found or approximated as closely as desired.

Particular blocks of bonds of a given issue are often marketed at different times and at amounts that involve different effective rates. In this situation it is possible to account for each block as a separate issue, with its own yield rate and accumulation or amortization schedule. As a practical matter, however, the better procedure is to combine the discount or premium on the various blocks and estimate and use the rate implicit in the total proceeds.

Methods of Accumulation and Amortization. The straight-line plan of accumulating discount or amortizing premium has been widely commended on the score of simplicity. The interest method is much more acceptable, however, particularly for the issuing corporation. The individual investor, usually holding only a small portion of an issue and often for a much shorter period than the life of the security, may not always find it expedient to use a scheme of revaluation in terms of an effective rate applicable from date of purchase to maturity. The corporation, on the other hand, is faced with the problem of accounting for the entire issue through the full contractual life (ignoring possibility of redemption by call or acquisition on the market) and should accordingly adopt the policy which will register the effect of the entire transaction in the periodic reports in

the most reasonable manner. Straight-line absorption of discount or premium results in equal periodic charges to income on account of interest, despite the increasing equity of the bondholder in the case of a discounted security and the decreasing equity where the security was issued at a premium. Under the interest method the interest charge each period is in harmony with the amount of the effective liability for the period—a condition clearly desirable.

Accumulation and Amortization—Illustrative Entries. For an example of the interest method of accumulating discount, assume that on January 1 M Co. issues twenty-year 4% bonds in the maturity amount of $1,000,000, with interest dates of January 1 and July 1, for $934,516.19, which gives a 4½% basis, and that the Company closes its books on June 30 and December 31. The following entries are required through the first year:

January 1		
Cash	$934,516.19	
Bonds Outstanding—Discount	65,483.81	
Bonds Outstanding—Maturity Value		$1,000,000.00
To record issue of bonds		
June 30		
Bond Interest Charges	21,026.61	
Bond Interest Payable		20,000.00
Bonds Outstanding—Discount		1,026.61
To charge income with interest accruing for six months at effective rate on initial liability and recognize amount currently payable and discount accumulation		
July 1		
Bond Interest Payable	20,000.00	
Bank		20,000.00
To record payment of nominal interest		
December 31		
Bond Interest Charges	21,049.71	
Bond Interest Payable		20,000.00
Bonds Outstanding—Discount		1,049.71
To charge income with interest accruing for six months at effective rate on accumulated liability and recognize amount currently payable and discount accumulation		

The interest charge in each period is determined by applying the effective rate per half-year, 2¼%, to the net book value of the liability. To begin with this liability is the amount received for the bonds, $934,516.19; for the second period this amount is increased by the accumulation of $1,026.61 to $935,452.80; and so on. It is

noticeable that with an increasing bondholders' equity and a constant periodic payment the amount of accumulation—interest withheld by the corporation—is successively greater. Continuing the process to maturity results in systematic accumulation of the entire discount.

For an example of amortization of premium by the interest method assume that the M Co. bonds are issued at a market rate of 3% and a price of $1,149,579.22, other conditions remaining the same. The entries the first year are:

January 1		
Cash	$1,149,579.22	
Bonds Outstanding—Maturity Value		$1,000,000.00
Bonds Outstanding—Premium		149,579.22
To record issue		
June 30		
Bond Interest Charges	17,243.69	
Bonds Outstanding—Premium	2,756.31	
Bond Interest and Premium Payable		20,000.00
To charge income with accrued interest at effective rate and recognize amount currently payable including premium amortization		
July 1		
Bond Interest and Premium Payable	20,000.00	
Bank		20,000.00
To record payment of nominal interest		
December 31		
Bond Interest Charges	17,202.34	
Bonds Outstanding—Premium	2,797.66	
Bond Interest and Premium Payable		20,000.00
(Explanation as on June 30)		

Again the interest charge each period is found by applying the effective rate per half-year, 1½% in this case, to the book value of the total liability. Here, however, the liability is being successively reduced by the amount of amortization of premium. With a decreasing interest charge and a constant interest payment the periodic amortization is evidently an increasing series.

The accrual of interest currently payable and the accumulation of discount can be recorded through separate journal vouchers if this is more convenient. For example, the following may be substituted for the entries on June 30 in the first illustration above:

(1)		
Bond Interest Charges	$20,000.00	
Bond Interest Payable		$20,000.00

(2)

Bond Interest Charges	1,026.61	
Bonds Outstanding—Discount.		1,026.61

In the second illustration, similarly, the entries on June 30, for example, may be extended into:

(1)

Bond Interest Charges	$20,000.00	
Bond Interest and Premium Payable		$20,000.00

(2)

Bonds Outstanding—Premium	2,756.31	
Bond Interest Charges		2,756.31

In this case the charge to bond interest account is too large by the amount of amortization but the account is corrected by the credit for amortization and no essential fact is misstated. The common practice of crediting amortization to a special income account is objectionable, however, if the balance of this account is reported as an actual earning; periodic amortization is an adjustment of interest charged, not an income.

In the case of bonds issued at a discount (or premium) between interest dates the accrued accumulation (or amortization) should be added (or deducted) in finding the equitable price. In practice, however, this adjustment is often ignored in setting interim prices.

Accumulation and Amortization Schedules. The nature of such schedules, useful as sources of periodic entries, is indicated by the excerpts below.

Accumulation Schedule

R Co. Debenture Bonds

Par Amount $*100,000.00* Bond Date *Jan. 1, 1949* Maturity Date *Jan. 1, 1959*
Coupon Rate *5%* Interest Dates *July 1 and Jan. 1* Issue Date *Jan. 1, 1949*
Proceeds $*92,561.26* Effective Rate *6%*

Period Ending	Net Liability	Interest Charged 3% of Net Liability	Interest Paid $2\frac{1}{2}$% of Par	Accumulation for Period	Total Accumulation
6/30/49	$92,561.26	$2,776.84	$2,500.00	$276.84	$ 276.84
12/31/49	92,838.10	2,785.14	2,500.00	285.14	561.98
6/30/50	93,123.24	2,793.70	2,500.00	293.70	855.68
12/31/50	93,416.94	2,802.51	2,500.00	302.51	1,158.19
6/30/51	93,719.45	2,811.58	2,500.00	311.58	1,469.77
12/31/51	94,031.03	2,820.93	2,500.00	320.93	1,790.70

Amortization Schedule

R Co. 1st Mortgage Bonds

Par Amount *$100,000.00* Bond Date *Jan. 1, 1949* Maturity Date *Jan. 1, 1959*
Coupon Rate *5%* Interest Dates *July 1 and Jan. 1* Issue Date *Jan. 1, 1949*
Proceeds *$108,175.72* Effective Rate *4%*

Period Ending	Net Liability	Interest Paid $2\frac{1}{2}\%$ of Par	Interest Charged 2% of Net Liability	Amortization for Period	Total Amortization
6/30/49	$108,175.72	$2,500.00	$2,163.51	$336.49	$ 336.49
12/31/49	107,839.23	2,500.00	2,156.78	343.22	679.71
6/30/50	107,496.01	2,500.00	2,149.92	350.08	1,029.79
12/31/50	107,145.93	2,500.00	2,142.92	357.08	1,386.87
6/30/51	106,788.85	2,500.00	2,135.78	364.22	1,751.09
12/31/51	106,424.63	2,500.00	2,128.49	371.51	2,122.60

If the date of actual issue does not coincide with formal date of bond or an interest date, other conditions being unchanged, the schedules are constructed as shown except for the first period. Suppose, for example, that the R Co. debenture bonds were issued on March 1 for $92,653.54 (exclusive of nominal accrued interest advanced by the buyer of $833.33). With this condition the first liability amount would be $92,653.54 (exclusive of liability to return interest advanced); the interest charge for the first period would be two-thirds of the amount shown in the schedule, or $1,851.23; the amount of interest paid, less the amount advanced by the buyer, would be $1,666.67; and the accumulation would be reduced to $184.56. The figures for later periods would remain unchanged.

Where accounting periods and interest periods do not correspond, as is usually the case, the proper entries can be readily determined by apportioning the amount of accumulation or amortization calculated in terms of interest periods.

Redemption of Bonds. When bonds are paid at maturity no special adjustments arise, assuming discount or premium, and associated issue costs, have been properly accounted for during the life of the obligation. If bonds are called prior to redemption, however, an adjustment of the stock equity is required in the amount of the excess of the redemption price (usually higher than par) over the net carrying value of the bonds at date of redemption. For example, the M Co. decides to call and retire outstanding bonds in the maturity amount of $1,000,000 at the redemption price of 103. At the call date—also an interest date—unamortized bond issue cost totals

$5,000 and the unaccumulated discount amounts to $30,000. Ignoring the matter of paying the last coupon, and also the question of incidental redemption expense, the appropriate entries are:

Bonds Outstanding—Maturity Value	$1,000,000	
Premium on Bond Redemption	60,000	
Amortization of Bond Issue Costs	5,000	
Bank		$1,030,000
Bonds Outstanding—Discount		30,000
Bond Issue Costs		5,000

The "premium" represents a reduction in the stock equity in favor of the bondholders that the corporation is willing to make because of the desire to terminate a particular contract and should presumably be reported in the income statement instead of being absorbed directly against earnings retained. It is an example of a realized financial "loss," even if voluntarily incurred. The amortization of the balance of the issue cost is a charge analogous to a retirement loss in the case of plant assets.

If a corporation made definite plans at the outset to redeem its bonds at the call price at a particular date prior to maturity, such price would in effect become the maturity value and the call date selected the date of payment. In this situation the original book value should be systematically accumulated (or amortized) to the expected redemption price. Such conditions, however, are not at all typical. Definite decision to exercise the right of redemption is seldom if ever made long in advance of actual call, and explicit recognition of the redemption price in the corporate accounting is therefore not feasible. The uncertainty is magnified in some cases by variation in specified call prices as of different dates.

Bonds are not redeemable at the option of the bondholder but occasionally bonds are convertible into capital stock, under specified conditions, at the initiative of the investor. Upon conversion, by the usual procedure, the net book value of the bonds is closed into the capital stock account (or accounts). An alternative treatment, with some merit, would recognize the implied issue value of the stock under prevailing conditions. For example, the M Co. has outstanding bonds issued at par that are convertible into no-par common stock on the basis of three shares for each $100 of maturity value. At a particular time the stock has come to have an established market value of $50 per share and the bonds are accordingly quoted

at $150. With these conditions bonds in the par amount of $100,000 are converted into stock. Assuming that revaluation of assets would not be appropriate, recognition of the implied issue value in the Company's accounts would require capitalization of retained earnings (if such earnings are present), as follows:

Convertible Bonds Outstanding	$100,000	
Retained Earnings	50,000	
Capital Stock (possibly divided into two portions, one showing stated value)		$150,000

This treatment, however, would hardly be justified in practice unless formal action were taken authorizing absorption of earnings in capital account.

Retirement at Less than Book Value. Due to changes in interest rates or changes in the credit position of the issuing corporation (or both) the value of outstanding bonds on the securities market may increase or decrease by a more or less substantial amount. In a period of depression the decline may be marked, particularly where payment of interest is endangered. There have been numerous examples, involving large companies as well as small enterprises, where the combination of fear of default and generally unfavorable conditions has resulted in quoted prices of $30 or less per $100 of maturity amount. With such conditions an interesting question of accounting treatment arises where a corporation acquires a block of outstanding bonds.

For example, the R Co. has outstanding an issue of $1,000,000 maturity amount of debenture bonds due in forty years. These bonds were issued at par ten years earlier. Due to various factors, including declining earning power and poor prospects of the issuer, the market value has fallen to 40% of par. At this point the Company acquires 10% of the outstanding bonds, paying the holders $40,000 and accrued interest. Ignoring the interest element the conventional entries are as follows:

Debenture Bonds Outstanding	$100,000	
Bank		$40,000
Gain from Bond Retirements		60,000

This treatment is objectionable. It involves the assumption that the investors are accepting less than a fair price for their bonds, and

hence are making an outright donation or contribution to the corporation. Actually there is no good reason in the typical case of this kind for concluding that the bondholders are making a sacrifice, are permitting the corporation to take advantage of them. Instead the amount paid the bondholders presumably reflects the value of their claims in the light of prevailing conditions. The total value of the R Co. as a going concern, in other words, has shrunk to an amount much less than the book value of the Company's assets—a shrinkage that has not as yet been acknowledged in the accounts. From this point of view the "gain" arising on retirement of the bonds at less than book value becomes an unassigned credit to assets, a partial recognition of the loss in value that the enterprise has suffered as seen through the eyes of buyers and sellers of securities.

Granting that the precise effect of eliminating debt by paying substantially less than the face or book amount may be debatable, it seems clear that the balancing credit does not represent actual revenue and cannot reasonably be viewed as reflecting taxable income. If treatment as a general valuation offset to assets is not considered practicable it is still desirable to exclude such items from earnings and report them as a special adjustment of the stock equity.

Treasury Bonds. Bonds that have been called or otherwise acquired for retirement are sometimes carried in a special clearing account until the cancellation has been formally authorized. Such an account offsets the book value of the bonds involved and should always be closed, or broken down into its components, at the end of the accounting period.

Where bonds acquired by the issuer are kept "alive" in the treasury, with the expectation of subsequent reissue, the error is sometimes made of reporting the holding as an asset. Such treatment is inexcusable. Treasury bonds and notes, like treasury stock, are never a true asset, regardless of the method of acquiring, length of time held, or manner of disposition. The acquisition by the borrower of his own promises to pay constitutes an effective reduction of outstanding liabilities, and this essential fact cannot be altered by formal details such as lack of cancellation and intention to reissue. When a short-term bank loan is repaid it never occurs to the borrower to view the returned note as an actual resource, even if it is intended to borrow again shortly from the same source and on the

same terms, and there is no sound basis for adoption of a different attitude in the case of long-term debts. Certainly the fact that a coupon bond in the treasury may be reissued in identical form is not adequate excuse for accounting for such a bond as an asset. There is, indeed, no essential difference between an authorized bond that has never been issued, but which has been printed and is in the treasury available for issue, and a similar bond that was once outstanding and has been acquired by call or in some other manner. The absurdity of the view that the corporation's own securities held in the "treasury" are assets becomes apparent when it is remembered that such "property" is conceded to be eliminated by the bare formality of cancellation. No doubt the error arises in part from overemphasizing the terms "sale" and "purchase" as applied to issue and acquisition of corporate obligations, and consequent failure to recognize the impropriety of viewing the single corporation as two entities, one of which is capable of investing in the securities of the other. "Sale" of bonds by the company is more accurately described as the issuing of evidences of indebtedness to parties contributing funds to the enterprise, and subsequent "purchase" of bonds is in essence the payment or retirement of outstanding liabilities.

Accumulation of Sinking Fund. In its traditional form the sinking fund for bond retirement is accumulated in equal annual or semiannual installments throughout the life of the security and is employed to pay the entire amount of the liability at the maturity date. For example, the M Co. issues at par first mortgage, 4% bonds in the amount of $1,000,000, payable twenty years from date of issue. The agreement with the bondholders provides that on each interest date the corporation must deposit with the Bay Trust Co., in addition to the interest currently payable, the sum of $18,427.10. This represents the semiannual installment, with interest at 3% compounded semiannually, that will accumulate to $1,000,000 by the maturity date of the bonds, and the trustee has undertaken to accept the deposits on this basis. (The expression for the installment which deposited at the end of each period for *n* periods will accumulate to $1 at *i* rate of interest is

$$\frac{i}{(1+i)^n-1}$$

Lengthy computations can usually be avoided through the use of

interest tables.) Under these conditions the entries covering the first and second sinking-fund payments, and the interest earned on the initial deposit, are as follows:

(1)

Bay Trust Co.—Mortgage Bond Sinking Fund. .	$18,427.10	
Bank		$18,427.10
To record first deposit		

(2)

Bay Trust Co.—Mortgage Bond Sinking Fund. .	18,427.10	
Bank		18,427.10
To record paying of second installment		

(3)

Bay Trust Co.—Mortgage Bond Sinking Fund. .	276.41	
Interest Earned on Sinking Fund		276.41
To accrue interest earned on fund		

Continuing this process through the forty interest periods will result in the accumulation of the amount necessary to retire the bonds. The entries at date of maturity, assuming actual payment is made by the trustee and ignoring bond interest, are:

First Mortgage 4% Bonds Outstanding	$1,000,000	
Bay Trust Co.—Mortgage Bond Sinking Fund .		$1,000,000

It is important to recognize that the interest accumulated on the fund, totaling $262,916 during the twenty years ($1,000,000 less forty times the semiannual installment), is income to the depositor and must be regularly accrued as earned in accordance with the terms of the contract. It is income, however, which is immediately dedicated to a special purpose, and a periodic appropriation of earnings to indicate this fact is desirable. The bond contract may provide for the accumulation of the entire sinking fund out of net earnings and in this event current income should be "reserved" under a suitable title each period in an amount equivalent to the sum of the regular deposit and the interest accruing on the fund for the period. Retention and earmarking of earnings is of course possible only when operation has been conducted at a profit. Making sinking fund deposits with a trustee, on the other hand, depends upon the availability of cash. It may be noted here that the provisions of the bond indenture with respect to fund requirements and procedures are often lacking in clarity.

Where a bond issue has a single maturity date, the amount which must be paid to the trustee semiannually to cover both current interest and retirement fund requirements is evidently the sum of the interest annuity and the calculated periodic deposit. Thus the M Co. (above example) must deposit with the Bay Trust Co. (assuming interest is distributed to the bondholders by the trustee) every six months the amount of $38,427.10 (current interest of $20,000 plus the installment for retirement fund of $18,427.10). Where the bonds of an issue mature in blocks at two or more dates the computation of an amount which deposited each period will take care of interest and meet all principal payments is somewhat involved, but is not a serious matter where interest tables are available. The first step is to find the present value of the various blocks and interest annuities at the rate to be earned on the fund. The next step is the calculation of the periodic deposit required to amortize an annuity of such present value in the required maximum term. The expression for the periodic payment required to amortize $1 and interest is

$$\frac{i}{1 - \frac{1}{(1+i)^n}}$$

Objections to Rigid Fund. The use of a rigid plan of accumulating funds to meet maturing obligations has disadvantages. For one thing such a plan ties up an increasing amount of funds at a low earning rate, which may be objectionable from the standpoint of the long-run interest of bondholders as well as stockholders. A scheme such as outlined above, moreover, ignores the fact that the amount of cash readily available for deposit in the fund is likely to vary sharply with operating and financial conditions, and that the inelastic requirement may accordingly place an unreasonable strain upon working capital in particular periods. The primary protection of the bondholder as well as the stockholder in the typical enterprise is the ability of the concern to earn, and care should be taken therefore not to introduce features into the contract with bondholders and trustee that will tend to hamper the management in its efforts to operate successfully. In many cases it is no doubt better to rely upon restriction of dividends, with the corporation free to invest funds retained as it sees fit, than to require establishment of a trusteed bond retirement fund. And where a sinking fund is employed it is often better

to set the amount of the periodic deposit as a percentage of gross revenue or net earnings rather than as a fixed number of dollars.

Current Utilization of Sinking Fund. In practice the arrangement with the trustee usually permits funds deposited in excess of interest requirements to be utilized to acquire outstanding bonds by call or acquisition on the open market. Where this is the situation the trustee's periodic report of the operations and status of the fund should include number of bonds acquired, their cost, and any other necessary details. Where bonds are regularly acquired through the sinking fund by purchase or call at a price above par this evidently means a scale of deposits above the level required to amortize par value. A particular block may of course be purchased by the trustee at a premium from any money deposited for retirement purposes, including interest earned on such money, provided the agreement grants the necessary authority. In general interest money deposits should not be applied to retirement of principal.

Under some arrangements bonds acquired by the trustee are held by him and carried on his books like other investments as a part of the fund. How should this situation be dealt with on the corporate records? For an answer reference should be had to the discussion of treasury bonds. Bonds that have been purchased from corporate funds deposited for the purpose represent liabilities effectively discharged, and should be reported accordingly. The fact that payment has been made indirectly through a corporate representative and that the bonds are included in the nominal amount of the fund does not justify any other interpretation. If desired a special contra account similar to treasury bonds may be employed by the company in this connection, but again it is good practice to adjust the main liability account directly.

Is the essential condition changed if interest is regularly "paid" on bonds held in the sinking fund? A negative answer is required. Where the periodic fund deposit has been calculated on the assumption that the entire accumulation will be invested in earning assets throughout the life of the fund, the use of the fund to acquire outstanding bonds will make necessary other payments by the corporation to offset the reduction in earning power resulting from such expenditures if the original program of accumulation is to be maintained; and including the "interest" on company bonds held

by the trustee in periodic deposits of interest money may be a convenient way of contributing the required additional amounts for retirement purposes. The bonds held are nevertheless not truly outstanding and payment of interest thereon is purely a formality of fund accumulation. The charge to bond interest on the corporation's books should be restricted to interest on securities actually outstanding and the balance of the interest money should be charged directly to the sinking fund.

Sinking Fund in Position Statement. Under prevailing practice the balance of the sinking fund at the end of each period as reported by the trustee is displayed on the asset side of the corporation's position statement, usually under a special head located between the current items and the figures for fixed properties. Ordinarily the amount is presumed to represent cash or equivalent, without regard to the particular manner in which the deposits made by the company have been invested by the trustee. As implied above the mistake is sometimes made of including in the fund balance the cost of company bonds acquired by the trustee and not yet delivered to the corporation.

Occasional support is found for the view that the entire balance of the fund, even if composed only of deposits and their accumulation, should be reported by the issuing corporation as a contra to the main liability account, to show clearly the extent to which provision for debt retirement has been definitely made. There are objections to this practice. The fund balance may be entirely outside the control of the depositing corporation, irrevocably dedicated to bond retirement, but until expended the fund remains a resource and until actual payment the bonds represent a true liability. If the trustee defaulted or the fund were dissipated in some other manner the bonds would not cease to stand as corporate liabilities. As long as the bonds are outstanding, further, the corporation must continue to pay interest thereon, a fact that makes it apparent that the debt has not been reduced by accumulation of a retirement fund.

Refunding Operations. Particularly in the railway and utility fields, where a large part of the capital employed is represented continuously by long-term bonds, payment of maturing obligations is usually effected by refunding. The money to retire outstanding bonds, in

other words, is secured by authorizing and issuing new securities. In most cases two distinct operations are involved, (1) raising of funds by new borrowing and (2) payment of the matured debt. Occasionally the holders of the old issue are given the opportunity to subscribe for the new bonds and are permitted to turn in their holdings, under prescribed conditions, in settlement of their subscriptions. Refunding on a considerable scale usually requires the services of investment houses or other responsible third parties.

Where refunding is undertaken prior to maturity by calling bonds in order to take advantage of declining interest rates a question arises as to the proper disposition of redemption premium and expenses, and unamortized bond issue cost. According to one view the excess of call price and associated expenditures over net book value (including unamortized issue cost) should be spread over the life of the new issue. Those who accept this view argue that since refunding before maturity would not be carried out if the move were not advantageous to the borrowing corporation the book loss suffered should be regarded as a special financing cost properly to be absorbed in the future rather than as an actual loss chargeable to current or retained earnings. In other words, it is held that the successive bond issues are so closely related that the refunding issue may be regarded as fused with the original contract for the purpose of accounting for redemption premium and expenses and any unabsorbed charges related to such contract. This position savors of the theory that undepreciated values of plant assets retired prematurely (from the standpoint of original estimates of useful life) to make way for improved types of facilities should be capitalized as part of the cost of the new units, and cannot be endorsed. The fact that all the conditions attaching to the existing obligation—including call price—must be carefully considered in relation to the interest rate and other features of the prospective issue in coming to a decision as to the wisdom of refunding does not justify retention on the books of any part of the payment to the retiring bondholders, or of the cost of issuing the original bonds. And neither the conditions leading to payment prior to maturity nor the method of extinguishing the old obligation alter the amount of the new liability, or affect the interest charge thereon, or influence the manner of utilizing the proceeds. If the old contract has become an unfavorable arrangement in the light of changed conditions the book loss that will arise through

refunding has already accrued, and actual refunding merely brings about a full realization of the loss and necessity for recognition.

When to Refund. The M Co., for example, has outstanding 5% bonds in the par amount of $1,000,000, issued at par, callable at any interest date at 103 and accrued interest, and due in fifteen years. At this point the Company could borrow money on similar security at 4%. The estimated expenditures (commissions, etc.) required to borrow the money necessary to call the bonds outstanding for a period equal to the remaining life of the old contract total $20,000. Unamortized issue cost related to the outstanding bonds amounts to $20,000. With these conditions will it pay to refund? The first step in answering this question is to find the present value, at 4% (2% per half year), of the payments required if the existing contract is carried to maturity. The present value of $1,000,000, the maturity amount, due in thirty periods at a rate of 2% per period is $552,-070.89. The present value of the interest payments of $2,500 per period for thirty periods at 2% per period is $559,911.39. The total of these two values is $1,111,982.28. On the other hand the outlay required to redeem the bonds immediately—including the estimated cost of raising the funds involved—is only $1,050,000, and the necessary funds can be borrowed at the rate used in valuing the expenditures required in continuing the present contract to maturity. The difference in favor of immediate refunding is $61,982.28. The existence of unamortized issue cost applicable to the existing bonds has no direct bearing on the question, but the fact that the amount of such cost becomes an immediate deduction for income-tax purposes if the bonds are called may be important. In the example the possibility that some incidental expenditures may be required in paying the bonds at maturity is ignored.

A decision to refund in the circumstances outlined need not imply a long-run prediction as to the course of interest rates. If refunding is carried out on a 4% basis there remains the possibility that a further decline in rates will make a subsequent refunding desirable. The prevailing opinion as to future rates will have a bearing on the term of the new bonds. Presumably the life of the new issue will be not less than the unexpired life of the old contract, but it may of course be set at a longer period.

Questions

1. What are the principal forms of long-term corporate liabilities? In what fields are such securities typically a prominent element in the capital structure?

2. Outline the principal steps in issuing bonds. Give illustrative entries.

3. How should bond discount be interpreted on the issuer's books? Outline the argument against treating such discount as an asset. As a loss.

4. "Par value is the proper expression of the true liability for accounting purposes throughout the life of the bond." Discuss.

5. How should bond premium be interpreted and handled on the issuer's books?

6. Give illustrative entries showing how bonds should be recorded when issued at a discount? When issued at a premium.

7. Contrast bond issue cost and bond discount.

8. How should the amount received covering accrued interest to date of issue be recorded by the corporation?

9. Outline the process of paying bond interest (1) where payment is made directly by the corporation and (2) where payment is effected through a trustee. How should unclaimed interest on coupon bonds be handled?

10. "The value of a bond is the sum of the values of two distinct elements." Explain. How would you proceed to find the value of a particular bond at a given yield rate where a table of values for the expression $(1 + i)^n$ is available?

11. Outline a method of estimating the effective interest rate.

12. With entries illustrate the interest method of accumulating discount and amortizing premium. Why does the periodic amount of accumulation or amortization increase throughout the term of the security?

13. Where bonds are called at a premium how should the excess of call price over the book value of the liability be accounted for?

14. Where bonds are acquired by the issuing company on the securities market at a substantial discount how should the excess of book value over the amount paid to bondholders be treated? Discuss.

15. What is the proper interpretation of "treasury bonds"? Why are such bonds not valid assets?

16. "Strictly speaking a corporation does not 'buy' or 'sell' its own bonds." Explain.

17. Describe the use of a sinking fund in connection with a program of debt retirement. What are some of the objections to the traditional form of accumulation?

18. Give entries illustrating utilization of sinking fund as accumulated to acquire bonds by call or purchase. How should bonds acquired by the trustee and held in the "fund" be accounted for by the issuing corporation? Under what circumstances is interest sometimes paid on such bonds? Give illustrative entries.

19. "The balance in a sinking fund dedicated irrevocably to bond retirement should be reported in the balance sheet as a contra to oustanding bonds, whether it be composed of bonds acquired but not yet formally canceled, other securities, cash, or some combination of these elements." Discuss.

20. "In refunding operations undertaken because of prevailing low interest rates

the excess of call price over net book value of oustanding bonds should be treated as a deferred charge, amortizable over the life of the new issue." Discuss.

21. With an illustration indicate how to determine if refunding prior to maturity is desirable. What bearing does the existence of unamortized issue cost or unaccumulated discount have on this question?

XXXIX

FINANCIAL STATEMENTS

Types of Accounting Reports. The principal types of periodic statements prepared by accountants, as pointed out several times in earlier chapters, are: (1) those representing financial condition at a given point (the position statement); (2) those depicting the effects of activity or operation for a particular period (the income statement). (Another type of activity report, the "funds statement," has sufficient importance to deserve listing as a major statement, although not as yet in general use and usually regarded as an interpretive device. See Chapter XLI.) These statements are the essential product of the underlying compilations and procedures of accounting, and in considerable measure the ultimate significance of the work of the accountant depends upon the character of the statements issued—the degree of care and discrimination exercised in their preparation and presentation.

Among the subordinate types of financial reports required from time to time are cash statements, sales reports, departmental operating reports, budgetary statements, and schedules and analyses of various kinds designed to supplement the primary statements. In addition specialized statements are often issued in connection with reorganizations and liquidations, valuations, governmental requirements (tax returns, security registration statements, reports to commissions, etc.), borrowing operations, stock listing, trade association activities, and other special circumstances.

The process of preparing the principal periodic statements has been outlined in preceding chapters, and a number of simple examples have been presented and discussed. At this stage it is necessary to give this important subject more complete consideration.

Preparation of Statements—Primary Considerations. In preparing any type of financial statement or report the accountant should not be restricted to any one rigid form. Granting the general desirability of standard procedures and of uniform terminology and arrangement, it remains true that business conditions are too varied to make it expedient to adopt a single fixed structure for all cases. Titles and arrangement may properly vary in harmony with the nature of the enterprise, the form of organization, the character of the equities, and the special needs of the management and others interested. On the other hand the limits of variation should be controlled by considerations of accuracy and clarity—considerations which may in some measure take the form of definite standards and rules of wide applicability. Further, within the particular business field it may be feasible to bring about a marked degree of standardization. The statements of steam railway companies, for example, conform in general to the requirements of presentation as prescribed by the Interstate Commerce Commission. Aside from governmental pressure the more important influences tending toward standardization in particular lines are the activities of trade associations and the efforts of professional accountants. The development of standard practice should be endorsed rather than deplored provided the procedures and rules adopted are truly suited to the conditions in the particular field, are not unduly inflexible, and are not employed in situations to which they are not applicable.

The importance of clarity in financial statements as opposed to mere technical form should be emphasized. In the underlying processes of accounting technical devices and precise systems of procedure are of marked importance, and are properly stressed by the accountant, but in the presentation of reports, designed to give information to managers and owners which will assist them in the effective administration of their enterprise, the primary criterion of excellence is usefulness and this depends particularly upon readability. It is essential, therefore, that the captions and titles used in statements be full and clear, and that the arrangement followed promote intelligibility even if at some sacrifice of traditional form. It must be remembered that financial statements are not an end in themselves, and that statements which cannot be understood, to say nothing of those which are definitely misleading, are worse than useless.

Position Statement—General Nature and Use. The position statement displays the underlying classifications of accounting, the assets and equities of the enterprise. In balance-sheet form it may be conceived, as explained earlier, as the framework of the double-entry system, the master account of the general ledger. What is more important for present purposes, the position statement represents the financial status of the enterprise, in so far as this may be disclosed by the accounts, at a particular moment of time, usually the close of the regular fiscal or accounting period.

Although drawn from the ledger balances at the close of the period, after the process of adjustment is complete, the position statement, it is important to remember, is not a mere compilation of debit and credit balances. It is a financial report, designed to give information to interested parties, and must accordingly be presented in the form most suited to this purpose. The captions used, for example, need not—in fact should not—conform precisely to the titles of ledger accounts. For statement purposes ledger balances may be combined in various ways under headings not necessarily conforming to titles. In condensed published statements, indeed, few if any individual items appearing in the report will correspond to particular account balances.

In general the position statement is the most widely used and highly developed form of financial report. For virtually all large enterprises, and for a great majority of the smaller concerns, some form of systematic exhibit of financial condition is regularly prepared by the accountant. In the published reports of corporations the position statement is usually more prominently displayed than other reports and is often given more emphasis in the accompanying comments and discussion. In the banking field, to mention an extreme case, the statements regularly or irregularly issued to the public are generally confined to the position statement with no disclosure of periodic income data.

The position statement is of special value to owners or stockholders, to the creditors, and to officers and general managers. It is this statement that shows the status of each equity in the enterprise, and this statement, accordingly, is of marked significance to those who have committed capital to the undertaking or are contemplating making such commitment. The periodic statement of assets and equities, in particular, throws some light upon the question of solvency, and the relative positions of the various interests as to

security. With respect to the single position report this is especially true in the case of short-term creditors. The bank that is making a sixty-day loan to an enterprise, for example, is interested above all in the probable cash position of the debtor at the date of payment, and the comparison of liquid assets and current liabilities which is afforded by the well-arranged position statement—coupled with appropriate budgetary data—is significant in this connection. For the purposes of owners and other long-term investors, it is of course desirable that a series of statements in chronological order be available, as by such means trends as well as immediate financial relationships may be recognized.

The statement of assets and equities, a bird's-eye picture of the position of the enterprise, is useful to the general management, especially the officials in charge of finances. The current section of the report summarizes the working capital situation, a knowledge of which is essential to the scheduling of expenditures for operating purposes, including interest and taxes, and to proper consideration of the question of dividends. The essential relationships implicit in this statement, moreover, must be considered in connection with programs of expansion and methods of raising additional capital; the character of the securities to be issued in raising additional long-term funds obviously cannot be determined without reference to the existing distribution of equities. However, it must be admitted that the position statement, especially where highly condensed, is not of great importance as an immediate basis for managerial decisions on the part of the heads of production departments, or of broad functional divisions such as represented by purchasing, distribution, and engineering activities. In the detailed work of administration it is the more specialized schedules, analyses, and reports, prepared to throw light on particular matters, that must be depended upon by the responsible parties.

Limitations of Position Statement. Notwithstanding its great importance the position statement has limitations that should be clearly recognized. In the first place may be noted a general technical difficulty. The work of determining and pricing inventories and of making the other necessary analyses and adjustments at the close of the period, particularly in the case of large enterprises, is likely to consume several days or even weeks, and is fraught with many complications. The position statement, accordingly, is usually

prepared some time after the close of the period "as of" the given date, and the precision of the "cut-off," in the face of a continuous stream of transactions and processes, is limited by considerations of expediency.

More serious is the fact that the "values" attached to some of the important items on the asset side are dependent in marked degree upon conventional procedures and assumptions. This is particularly true of plant assets. Funds invested in specialized plant are more or less irrevocably committed to operations and often have little independent realizable value. The values of such factors as shown in the statement should therefore be viewed primarily as charges reasonably applicable to future activities rather than as available money resources. On the assumption that the enterprise will continue to operate as planned, and that revenues as they appear will be sufficient to validate the commitments already made, it is proper to treat the unabsorbed costs of plant units, in existence and functioning, as true assets for statement purposes. At the same time it must be borne in mind, in presenting and interpreting the position statement, that there is a real distinction, particularly with respect to the question of immediate liquidity and solvency, between bank balances, marketable securities, and other assets representing current funds, on the one hand, and units of specialized plant, technical production factors, on the other. Failure to recognize this point clearly is at the root of much misunderstanding and contention with respect to methods of preparing the position statement and the significance of this type of report.

The ordinary position statement has another weakness, again particularly in the area of the fixed assets, in that changes in values resulting from specific or general price movements are seldom recorded regularly in the accounts. This is especially true of upward movements. Land owned, for example, is subject to marked changes in value but such changes are usually not given accounting recognition except in special circumstances. Similarly, replacement costs of buildings and equipment may increase or decrease over a period of years but conventional accounting procedure tends to neglect recognition of these changes (or, at any rate, of the increases) unless and until an adjustment is forced by the very magnitude of the change or by some special event such as the advent of new managerial or ownership interests.

Further, there are many factors which have an important bearing

upon both the immediate and long-run financial standing of an enterprise that are not represented in the position statement, however well prepared. The general character of the management, the loyalty and efficiency of the rank and file of the staff, the credit standing of the organization, the reputation and prestige of the concern with the consuming public, the possibilities of expanding output, and other imponderable conditions and circumstances, are often of the utmost importance in determining the true condition and value of a business. Such factors, however, cannot be readily measured in dollars and cents and hence no attempt is ordinarily made to account for them in the ledger or to set up estimates therefor in the regular reports. In fact the measurement of the going value of the enterprise as a whole, in the light of all its conditions and prospects, is a problem of extreme complexity, and is seldom undertaken systematically except for the purpose of establishing a price in connection with a transfer of ownership, determination of a rate base (in the utility field), or in some other special situation.

It may be noted, finally, that contingent liabilities and assets are seldom presented explicitly in the statement, although accountants commonly support the practice of calling attention to contingencies in all cases in which there is any definite basis of measurement available and in which the prospect that the contingency may become an effective liability or asset is more than a mere possibility.

Classification of Assets. From a legal standpoint the property of the business enterprise, like that of the individual, may be classified into two main groups, realty and personalty. By realty is meant land and natural resources and all more or less permanent and immovable structures attaching thereto. Personalty includes all property other than realty—cash, receivables, commodities, securities, and so on. This basis of classification, however, has little significance for the accountant, either in connection with the underlying accounts or the financial reports. Likewise the tangible-intangible line of cleavage, although important in certain connections, is not helpful as a fundamental basis of classification. In general the most useful starting point, both for ledger arrangement and for statement presentation, is the current-fixed basis of division, a basis which has been referred to and employed from time to time in the preceding pages.

The principal tests or methods which may be applied in distinguishing fixed and current assets are: (1) degree of liquidity; (2)

normal term or length of life; (3) rate of transfer to expense or loss; (4) technical character or method of use; (5) nature of business and intent of management. These are not entirely independent criteria but each has some significance in itself. By liquidity is meant ease or speed of conversion into money or purchasing power without serious impairment of value. Thus a bank account is extremely liquid, whereas a building or a unit of equipment is commonly a highly non-liquid asset. The second test refers to length of life, regardless of other conditions. A thirty-day account receivable is a current asset; a mortgage bond owned, due in ten years, is a fixed asset. (If the bond is highly marketable it might be rated a current asset on that account.) There is some doubt as to where the line should be drawn on a time basis, but it is generally agreed that to be treated as current an item should expire or mature in less than two years, as the outside limit. The third and fourth criteria are closely related and apply only to assets consumed in production. Thus a building passes slowly into operating expense whereas a particular stock of supplies or merchandise usually is held for a comparatively short period. Further, as pointed out earlier, a building or piece of equipment is never consumed physically as are raw materials and supplies. A building is used in its entirety to give off a series of similar services throughout its effective life; a pile of coal, on the other hand, is consumed in definite physical installments. The nature of the business and the purpose of the management may also have a bearing. Land in the hands of a real estate firm, for example, may be in effect merchandise and hence a current asset, whereas land used as a site for a building is clearly a fixed asset. Likewise a marketable security, held in a sinking fund, under restrictions, may be a fixed asset, while the same security held as reserve working capital may be viewed as a current asset. It is not always easy to label the particular asset as either fixed or current; in practice many doubtful and debatable cases are encountered.

There are five main classes of current assets: (1) cash; (2) temporary investments, readily realizable; (3) short-term receivables; (4) inventories; (5) current prepayments. Marketable securities and call loans are usually deemed to constitute current assets unless held for some special purpose, as already noted. The third subdivision covers ordinary accounts, notes, drafts and all other recognizable short-term claims to money or the equivalent. The fourth class is obviously broad and may include such items as office, store, factory, and

shipping supplies (often listed as prepayments or deferred charges) as well as all kinds of materials, work in process, and salable merchandise. In some instances inventory items are very slow moving and may, not improperly, be excluded from current assets. Prepayments include unexpired insurance premiums, prepaid rent, prepaid royalties, advances on orders, and similar items. In some cases valid current assets of this class, together with a miscellany of "unadjusted debits," discounts on securities, and organization and development costs, are exhibited under the caption "deferred charges." This is objectionable practice.

Fixed assets, in the broadest sense, may likewise be divided into five groups: (1) non-current investments; (2) land and other natural resources; (3) buildings and other structures; (4) equipment of all types; (5) intangibles. The first group includes holdings of securities of affiliated companies, sinking funds, surrender values of life insurance, and all other non-current receivables and claims. The second group has two main subdivisions, land used as building sites and for right-of-way purposes, and wasting natural resources. The third and fourth groups, the depreciable plant assets, are closely allied and may without impropriety be combined for the purpose of presentation in condensed statements. These groups cover a great range of kinds of property, as explained earlier. By intangible assets are meant the values (under conditions where they may be appropriately recognized) of such assets as patents, trademarks, trade names, copyrights, brands, franchises, and secret processes, as well as the goodwill inhering in established connections. Organization costs and development charges, properly capitalized, should perhaps be treated as a sixth class of fixed assets; they have both tangible and intangible aspects.

Presentation of Assets. Following is an outline of rules and recommendations relating to the preparation of the asset side of the position statement.

1. Order should run from most highly current or realizable items to most fixed and unrealizable. The use of the general headings "current" and "fixed" is desirable in some cases but in many situations the breakdown of the non-current group in particular into two or three main divisions, with appropriate captions, is to be recommended.

2. Under current assets a subtotal of cash, current marketable securities, and—possibly—of first-class receivables may well be displayed. A total of all current assets should also be shown. Market values as well as costs of marketable securities should generally be reported (one of the measures being shown parenthetically).

All marketable securities held, including tax notes, should be included in assets; reporting as deductions from related liabilities is undesirable. Similarly other receivables should not as a rule be canceled against payables. It is not necessary to show balances in particular banks separately and in condensed statements cash on hand may be combined with cash in bank. Cash in closed banks or otherwise restricted should be excluded from current assets proper. Long-term receivables should also be excluded. Special receivables, such as loans to officers and employees and balances due on stock subscriptions (if included in assets), should be segregated from ordinary accounts and notes.

3. Allowances for bad debts and other offsets to receivables should be shown as deductions from gross values, net balances being extended. A satisfactory variation is the parenthetic display of gross book value and amount of allowance. This rule conforms to the view that if the reader of the statement is aware of the amount of the offset established he has a better basis for judgment.

4. The basis of valuation of inventories and supplies should be clearly stated in an accompanying explanation if not on the face of the report. In condensed statements segregation of the main classes of inventories—materials and supplies, work in process, and finished stock and merchandise—is not essential. Where, however, damaged or obsolete goods are included, or other special conditions obtain, and the amount involved is relatively large, the separate showing of the special item, with clear explanation, is recommended. In the case of standard goods with realizable market values that are readily determinable a parenthetic showing of such values—where cost is the main accounting basis—is desirable. Where the accounts have been adjusted to market values the amount of cost (or the amount of the adjustment) may well be shown parenthetically. A supporting schedule is often helpful.

5. Sinking funds, especially where trusteed and restricted, should appear as an independent heading, between the current assets and the plant assets proper, as the inclusion of such accounts with plant or other fixed assets is likely to be confusing. Such funds should never include the securities of the reporting company. That is, neither the stocks nor other securities of the issuing company, held by the trustee as a technical feature of the procedure of operating the fund, are true assets. It is also improper to show sinking funds dedicated to the retirement of outstanding liabilities, and composed of cash or securities other than those of the reporting company, as a contra to the amount of such outstanding liabilities.

6. Investments in affiliated companies, and other non-current securities and receivables, should be shown under a special heading following the current assets Basis of valuation should be clearly indicated. The company's own issues, in the "treasury" or otherwise not outstanding, should not be included. A supporting schedule, with appropriate reference thereto in the main statement, may be needed.

7. Under the subhead "plant assets," or similar caption, land and other non-depreciable items should be segregated and depreciation accrued should be shown as applying only to the depreciable assets. This rule, often ignored, is important; where non-depreciable and depreciable assets are shown combined in a single figure, with accrued depreciation treated as a contra to the total, the reader is left with little basis for forming an intelligent general opinion. The same rule should be observed in displaying assets subject to depletion. The depreciation allowances to date should be displayed; the presentation of net book balances only, with no

clue as to the extent of depreciation recognized, is objectionable. However, in the case of depletible assets it is sufficient to show the depleted balance of the property.

8. Where revaluations of fixed assets are introduced into the accounts there are two main procedures that may be followed and corresponding forms of presentation in the statements. Under one approach the gross adjustment of plant, the corresponding adjustment of accrued depreciation, and the resulting effect upon the stockholders' equity, are shown in supplementary accounts, and as the recorded value of the asset affected—in the case of depreciable elements—is transferred to expense the suspense account showing the equity adjustment is likewise transferred to the income reckoning, with the final result that earnings retained are accounted for without being affected by the revaluation. Under an alternative procedure (the quasireorganization approach) the estimated present values of the assets are substituted for the previous book figures, with the net difference shown as a permanent adjustment of stockholders' capital. Whichever procedure is followed there should be clear-cut and complete disclosure in the statements, or in accompanying explanations. If values of assets have changed materially, but it is decided not to adjust the accounts, it is desirable that the new conditions be indicated in statement notes or accompanying explanations.

9. Organization costs and development charges, if of substantial amount, should be shown under a distinct heading, immediately following the plant assets. The use of a supporting schedule is often desirable.

10. Intangible assets should be shown separately, usually as a final item on the asset side. The amount of accrued amortization, if any, should be reported. The basis of valuation should be indicated and in some cases supporting comments covering the origin and composition of the amount shown are needed.

Presentation of Equity Side. Following is an outline of points to be observed in the presentation of equities.

1. Current liabilities should come first (assuming that current assets appear first on the asset side), and a subtotal should be shown. A condensed showing is usually adequate, but accrued liabilities, such as interest, are often distinguished from ordinary accounts and notes. All estimated "reserves" for tax liabilities and other reasonably definite obligations, current in nature, should be included. Even in the case of such accounts as reserves for workmen's compensation, injuries and damages, maintenance guaranties, etc., in which estimate plays a large part, inclusion in current liabilities is proper provided the account can be interpreted as a reasonable statement of the amount payable, in a period of one year or less, as a result of claims, etc. that have already been established or may be said to be accrued.

2. The fixed or long-term liabilities—notes, bonds, mortgages, etc.—should follow the current section. Great detail is not required for most purposes. Such obligations to the extent maturing within a year or less, are sometimes treated as current liabilities, but in cases where the liability is to be refunded or where the resources to meet the obligation have not yet been accumulated in current assets this presentation is likely to be more misleading than helpful in the interpretation of working capital. An alternative treatment is emphasis on approaching maturity dates on the face of the statement or in accompanying footnotes. Bonds and notes

in treasury or in special funds should be treated as contra liability items rather than as assets, the net amount outstanding being extended. True discount, the difference between the sum paid or invested by the party to whom the security is first effectively issued and the amount due and payable at maturity date, should likewise be treated as a contra to maturity or face value, to show the actual equitable amount of the obligation at date of issue, and in statements at subsequent dates the unaccumulated portion of the discount should be similarly handled. This requirement is met by few if any finançial statements as now prepared. Unamortized premium should similarly be shown as a part of the total effective liability on the date of the statement.

3. A total of all liabilities, both current and long term, should be clearly shown on the face of the statement. Only in a minority of cases is this simple requirement met by present-day published statements.

4. In occasional cases "reserves" are of such an indeterminate character as scarcely to justify inclusion in liabilities, or interpretation as an element in the stock equity. Where these instances arise it may be necessary to present the balance involved in an intermediate position following the liabilities proper. Wherever possible, however, such accounts should be interpreted definitely in the light of their dominant characteristics as contra assets, liabilities, or earnings retained and should be reported accordingly.

5. Liabilities which are purely contingent—possible claims, in other words, which may become effective under certain unfavorable circumstances that have not yet materialized—can hardly be given definite recognition in the position statement except in the form of references to accompanying explanations and notes. Such liabilities do not constitute effective equities at the date of the statement.

6. In consolidated reports the equity of minority stockholders in the subsidiary companies should be set up under a special head preceding the equity of the parent or dominant company. See section on consolidated reports later in this chapter.

7. The stock equity should be prominently displayed under the heading "stockholders' equity," or other appropriate caption. Under no circumstances should "treasury" shares be reported as assets. Holding the amount paid to retiring stockholders temporarily in a suspense account, and reporting such account as a contra to the stock equity, is not seriously objectionable (if it does not result in misinterpretation of subsequent transactions) but the sound procedure is that which treats treasury shares like unissued stock. It is advisable to give the number of shares authorized and number of shares issued—with other pertinent details—on the financial statement or in accompanying notes. Discounts on par-value stocks should be shown as contras to nominal values. Where practicable a distinction should be drawn between legal discount, callable by assessment, and other offsets.

In the case of unincorporated enterprises the equity accounts of partners or other owners take the place of the capital and earnings retained of the corporation.

8. Premium on par-value stock or excess of amount paid in over stated value in the case of no-par stock should be combined with the nominal value of the stock in a subtotal under equity of stockholders, as this facilitates drawing a distinction between the amount invested by stockholders and earnings retained. Under the subhead "retained earnings" a division between appropriated or restricted earnings and the unappropriated balance is desirable.

9. Increase of the stock equity resulting from revaluation of plant or other assets

should be displayed under a special heading. Subsequent treatment of this item will depend upon which of the two major procedures for dealing with revaluation are adopted.

10. Where preference capital stock is outstanding the amount thereof should be displayed as a first subdivision of the general stock equity section. In such circumstances a separate total of the equity of common stockholders should be determined and clearly displayed on the face of the statement. In the absence of special conditions earnings retained are considered to be a part of the common stock equity.

Model Condensed Position Statement. In addition to the above recommendations as to presentation of assets and equities, attention should be called to a number of matters relating to the general form of the position statement.

1. Title should include recognized name of enterprise (precise legal name in case of corporation), general caption, and effective date. Special care should be taken to draw a clear distinction between consolidated statements and those corresponding to legal entities.
2. Presentation of assets and equities on left and right facing pages is the most common form in printed statements, and is satisfactory provided adequate provision is made for contra accounts, subordinate captions, and subtotals. A minor variation consists of a presentation of assets following the main title on one or more pages or sheets followed by the equity side similarly exhibited.
3. Adequately descriptive titles, with references to any supporting schedules and explanations, should be employed.
4. Full comments and qualifying explanations should appear in body of statement, in footnotes, or in supplementary discussion. Where the discussion is extended, however, it is common to view such material as a distinct type of reporting rather than as a part of the formal statement.

On the two following pages is an outline of a condensed form of position statement conforming to the recommendations which have been given above.

Providing for the effects of an appraisal is for the purpose of showing a proper method of reporting the adjustments if they are made and should not be construed as a recommendation that the statement be regularly placed on an appraisal basis. In the presentation shown it is assumed that the results of revaluation are being handled as supplementary, adjustment data. If present values were substituted for dollar cost figures (the quasireorganization approach) a more condensed treatment, with proper accompanying explanation, would be appropriate. In this outline example it is assumed that the preferred stock has no equity in retained earnings.

The use of parenthetic details and references to supporting data is indicated at a number of points. The suggestions given are not

PRODUCT
Position
December

Assets

Current:				
Cash on Hand and in Banks		xxx		
Marketable Securities (basis of valuation indicated)		xxx	xxx	
Accounts and Notes Receivable		xxx		
Less—Allowance for Uncollectibles (and other adjustments)		xxx	xxx	
Inventories of Materials and Supplies, Work in Process, and Finished Goods (basis of valuation indicated)			xxx	
Prepayments (unexpired insurance, prepaid rent, salary advances, etc.)			xxx	
Total Current Assets				xxx
Investments in Affiliated Companies (basis of valuation)				xxx
Plant:				
Land—Cost		xxx		
Land—Adjustment to Present Value		xxx	xxx	
Buildings and Equipment—Cost	xxx			
Less—Allowance for Depreciation	xxx	xxx		
Buildings and Equipment—Adjustment to Replacement Cost (reference to explanatory note)	xxx			
Less—Accrued Depreciation Adjustment (reference to explanatory note)	xxx	xxx	xxx	
Total Plant Assets				xxx
Organization Costs (reference to supporting data)				xxx
Patents—Cost			xxx	
Less—Estimated Accrued Amortization			xxx	xxx
				xxx

exhaustive and are offered primarily for the purpose of calling attention to the need for adequate headings and for accompanying explanations of items that are especially subject to misinterpretation or that cannot be conveniently described on the face of the statement. The use of specific headings for the totals of current assets, current liabilities, etc. is not imperative where the nature of these figures is clearly indicated by the group captions.

The form employed must of course be varied to suit the circumstances of each situation. The line of business involved, the form of organization, the type of capital structure, the basis of plant valuation–these and many other matters have a decided effect upon the headings used and the arrangements followed. An important consideration, affecting especially the degree of condensation, is the principal purpose to be served by the report, the nature of the audi-

COMPANY
Statement
31, 19—

Equities

Current Liabilities:				
Accounts and Notes Payable		xxx		
Payrolls, Taxes, Interest (and other accruals)		xxx		
Dividends Payable		xxx		
Advances by Customers		xxx		
Total Current Liabilities			xxx	
Long-Term Liabilities:				
First Mortgage, 5% Bonds, 19—				
Amount Due at Maturity		xxx		
Less—Unaccumulated Discount		xxx	xxx	
Total Liabilities				xxx
Stockholders' Equity:				
Capital Stock—Preferred (details)			xxx	
Equity of Common Stock—				
Capital Stock—Common (details)—				
Par or Stated Value	xxx			
Contributed in Excess of Par or Stated Value	xxx	xxx		
Retained Earnings—				
Appropriated (details or reference to schedules)	xxx			
Unappropriated (reference to related income statement)	xxx	xxx		
Total Equity of Common Stock on Cost Basis		xxx		
Adjustment Resulting from Revaluation		xxx		
Total Equity of Common Stock on Adjusted Basis			xxx	
Total Equity of Stockholders (including valuation adjustment)				xxx
				xxx

ence to be reached. For the use of the general management, actual or prospective investors, and other interests not concerned with details, a clearly stated condensed statement is usually most helpful. For certain internal administrative purposes, on the other hand, a more extended statement may be needed. In many cases, as noted earlier, the needs of particular officials and departments can be better met through the preparation of special detailed reports and schedules than through the extension of the major statements.

Alternative Model Form of Position Statement. In recent years, in the search for more helpful and understandable forms of financial statements, quite a number of corporations have abandoned the balanced form in favor of a nontechnical arrangement following the assets-minus-liabilities-equals-proprietary-equity scheme referred to

and illustrated in earlier chapters. Following is an outline example adapted from a published statement:

M Company
Financial Position
December 31, 19—

Current Assets:		
Stated at realizable values—		
Cash	xxx	
United States Notes	xxx	
Receivables (less estimated bad debts)	xxx	
	xxx	
Stated on basis of cost—		
Inventories	xxx	
Current Prepayments	xxx	xxx
Current Liabilities:		
Payables	xxx	
Federal Tax Liability	xxx	xxx
Net Current Assets		xxx
Land (at cost)	xxx	
Buildings and Equipment (costs not allocated to operations)	xxx	
Patents and Other Intangibles (stated at nominal amount)	xxx	xxx
		xxx
Long-Term Liabilities (details)		xxx
Net Assets		xxx
Derived from:		
Capital Stock	xxx	
Earnings Employed in Business	xxx	
	xxx	

In this example the expression "net current assets" represents the amount of working capital, and "net assets" is the total equity of the stockholders. The amount of accrued depreciation to date might well be shown parenthetically. Moreover, it would be better practice to carry "patents and other intangibles" at cost (or other basic value) less amortization rather than at a nominal figure.

This type of statement has distinct advantages of readability, and may well become the standard form of presentation.

A compromise presentation used by some companies consists of a balanced form with the right-hand side divided into two main sections, of equal rank, the first headed "Liabilities" and the second "Capital" or "Capital and Surplus."

Income Statement–General Nature and Use. The income statement is a systematic array of the data of revenues, revenue deduc-

tions (expenses, losses, taxes), net income, and the distribution or assignment of net income to creditor and proprietary investors, for a particular period. In its most comprehensive form it also includes the data of retained earnings at the beginning and end of the period.

The income statement is the major activity report prepared by the accountant. It displays the results of operations, broadly defined, the material of outstanding interest to management and those furnishing the funds. It is the power to produce income that is the primary characteristic of the going business as opposed to a mere aggregation of assets, and the amount and rate of income are the most important criteria of the degree of success attending the operation of the enterprise. Earning power is the basic factor in determining the values of the equities of the investors. It is earnings, moreover, that furnish the underlying gauge of dividend possibilities.

The single income report should not be taken too seriously. There is no more difficult problem of quantitative measurement and interpretation than that of determining the income of a complex business institution for a given period of time, especially where the period is short. The typical enterprise is a continuing entity, and setting up a definite showing of financial position at the beginning and end of the period means that many living fibers of activity must be cut, more or less artificially, that estimate and judgment must be relied upon at numerous points. On the other hand the amount and trend of income as shown by a series of such reports, carefully and consistently prepared, are reasonably dependable facts, of real service in guiding the actions of interested parties.

Presentation of Income Statement—Outline of Rules. With respect to general form the following are the chief points to be emphasized in the preparation of the income statement:

1. Title should include name of enterprise, general caption, and indication of period covered. The year is in most cases the most important period of income reckoning.
2. The "running" or report form is more satisfactory than a technical account form emphasizing debit and credit relationships. The older account form has been largely abandoned by American companies in their published reports.
3. Adequate descriptive titles, with references to footnotes, accompanying comments, or supporting schedules, should appear in the body of the statement. Ledger account titles are usually unsatisfactory in this connection.
4. Full comments and explanations should appear in footnotes or in supplementary discussion if it is not feasible to incorporate such material in body of statement.

With respect to specific content and arrangement the following suggestions and recommendations are offered:

1. Sales (or other major type of revenue) is the proper initial figure, and should never be omitted, even in condensed reports. Extensive classification of revenues, however, is not required in the general income statement. As a rule all gains, including interest and dividends earned, rental income, royalties, etc., should be shown as additions to sales or other major revenue classifications.

2. Sales adjustments, such as discounts and returns, should be treated as corrections of gross revenue rather than as expenses. The regular deduction for bad debits may be included in sales adjustments.

3. Intermediate "profit" balances, derived by deducting particular types of expenses from revenues should not be displayed in general income reports, although they may be of some value in departmental accounting. The word "profit" should never be used until all expenses, losses, and taxes applicable to the revenues in question have been deducted, and "net income" is a preferable term at that point.

4. Depreciation, to the extent of a reasonable charge, should always be included in expenses, and the fact that depreciation has been included should be made clear in the report.

5. In general, expense classifications should be presented in supplementary schedules; the use of a few headings should suffice for the main income statement.

6. Expense adjustments (such as purchase discounts) should be deducted from gross expenses instead of being displayed as actual earnings. This point is often overlooked in statement practice, and in some cases serious distortion of figures is the result.

7. Interest charges—compensation for creditor capital—should be treated as a distribution of income rather than as an expense. Otherwise the fact of the concern's earning power as an economic entity, aside from specific capital structure, is obscured, and comparisons between different enterprises and between periods in the same enterprise tend to be improperly made. This point is especially important in the case of concerns having a large continuing interest-bearing indebtedness.

8. Preferred and common dividend appropriations should be separately deducted and the income available to common stock should be emphasized.

9. The addition to (or deduction from) earnings retained after current dividend appropriations should be clearly displayed. This requirement is seldom observed in corporate reports but nevertheless has merit.

10. All losses and gains should be explicitly shown in the income statement, although in special cases these data may appear as adjustments of net income rather than as deductions from revenue. The policy of excluding "extraordinary" losses and other adjustments from the main income report opens the door to serious misrepresentation and suppression of important information.

Intermediate Balances in Income Statement. The rule that intermediate balances be avoided in the display of revenues and revenue deductions in the general income statement runs counter to tradition, particularly in certain fields, and requires further support. The argument for this rule may be outlined as follows. In the price-

making process all necessary costs of operation are on essentially the same level. There is no warrant for the view that certain types of costs have priority or right of way over other charges, or are more surely recoverable than other charges. In relation to the volume of revenues all costs are essentially homogeneous. Where revenues are insufficient to cover all costs this does not mean that certain costs are recovered in full while other charges are entirely "unearned"; the truth is that revenues apply proportionately to all classes of charges. It is quite unreasonable to assume that merchandise cost in the trading field, or so-called production cost in manufacturing, has any peculiar virtue. In the last analysis cost of merchandise is primarily a bundle of service costs of various types incurred by agencies other than the buying concern, and the various service costs incurred by the merchandiser in turn are very similar in economic character. Likewise those costs of manufacturing for which the cost accountant finds plausible bases for assignment to production in the narrow sense are no more significant in the entire process than the unassigned costs.

It follows that there can be no net income, in any legitimate sense, until all costs have been taken into account, and to express the matter otherwise in the income report is almost certain to lead to misunderstanding on the part of customers, employees, and the general public, and tends to be confusing to management and investors. Surely it is not to the interest of any enterprise to issue reports in which "profit" balances, far in excess of actual net income, are prominently displayed. It also follows that order of deduction of charges is a matter of convention and convenience, nothing more. Some classes of charges are of course more important quantitatively than others, in the particular concern, and hence may deserve emphasis by position in the report, but a procedure designed to give emphasis should not be carried to the point of implying degree of propriety or recoverability.

It is granted that it may be desirable in many income reports to distinguish between cost of sales in the sense of merchandise cost or production cost and other types of charges (although the importance of this line of cleavage in condensed reports for the enterprise as a whole can easily be exaggerated). Such classification, however, does not require the striking of an intermediate balance, the disclosure of a so-called "gross profit."

In departmental computations it may be desirable or even neces-

sary to strike balances before recognition of the costs common to all divisions and hence assignable only on an arbitrary basis. But even in this connection it should be borne in mind that directing attention to departmental margins may be less useful than emphasis upon percentage relations of particular types of departmental costs to departmental sales.

Model Condensed Income Statement. The outline form shown below illustrates the general application of the foregoing rules.

M Company
Income Statement
For Year Ended December 31, 19—

Sales (or other main kind of revenue, appropriately labeled—with reference to supporting schedule for departmental data)	xxx	
Less Sales Adjustments (discounts, returns, estimated uncollectibles, etc.)	xxx	xxx
Other Revenues and Gains (interest and dividends earned, rentals, royalties, gains on disposition of property, etc.—with reference to supporting schedule where details are needed)		xxx
Total Revenues		xxx
Expenses (subdivided and explained as fully as desired here or in supporting schedules)	xxx	
Losses (explained as desired here or in supporting notes)	xxx	
Taxes (principal subdivisions may be shown here or in supporting schedule)	xxx	
Total Revenue Deductions		xxx
Net Income		xxx
Interest Charges		xxx
Earnings of Stockholders		xxx
Preferred Dividends		xxx
Earnings of Common Stockholders		xxx
Dividends on Common Stock		xxx
Earnings Retained in Business		xxx
Retained Earnings Balance, January 1, 19—		xxx
Retained Earnings Balance, December 31, 19— (see position statement)		xxx

The income statement may begin with the figure of net or adjusted sales—that is, gross sales less returns, discounts, and allowances. It is desirable, however, to report the amount of estimated uncollectibles. In no case should returns and ordinary discounts be included in expenses. Cancellation of selling costs or other expenses against revenues, with the difference only reported, is objectionable. Classification of sales in any detail is impracticable for the general income statement but departmental schedules are useful in internal accounting and may sometimes be desirable in published reports.

"Other revenues" are often an important element in the income

statement and full disclosure is desirable on the fact of the statement or in accompanying data. Ordinarily it is not expedient to attempt to segregate expenses applicable to such revenues in the main body of the income statement. Usually the cost or other book value of investments or plant assets sold is deducted from gross proceeds and the difference only is reported as a gain (or loss). In this event an accompanying explanation is desirable if the effect on net income is substantial.

The division of expenses into four or five main classes of charges is usually adequate for the over-all income statement. As pointed out in an earlier chapter the classification of expense may follow departmental lines or broad areas of cost allocation (for example, manufacturing, administration, selling), or may emphasize the kinds of cost factors utilized (labor, materials and supplies, depreciation, taxes, and so on). In any event a separate listing of depreciation, depletion, and amortization of intangibles (or parenthetic indication of the amount of such deductions) is desirable in view of the extent to which estimates are involved in the computation of these costs. Separate showing of losses and taxes is provided for in the outline form. However, these types of deductions are combined with expenses to make a total of revenue deductions and intermediate balances are thus avoided. Distinctions can be drawn between expenses, losses, and taxes as a matter of concepts, but the application of these distinctions is difficult in practice, and in the over-all income statement for the year they have little force in most cases. Expenses shade into losses and vice versa. Business operation involves many economic hazards as well as technical activity, and it is often impossible to draw a line between the effects of the hazards and the results of administration as such. In the case of taxes a common procedure is to include in expenses all levies other than those on income, and certain types of taxes are generally treated as inventoriable costs. Nevertheless there is substantial merit in the suggestion that all kinds of taxes be pulled together as one major type of revenue deduction, and where this is considered impracticable on the face of the statement the use of a supplementary schedule showing the entire tax burden is recommended.

The model form shown is evidently designed particularly to meet the needs of corporate organization, and provides for recognizing both interest on borrowed funds and dividends on preferred stock. Common dividends as well as preferred are shown as deductions

from current earnings. This is generally desirable, although in some cases it may be more appropriate to show dividends as an appropriation of past earnings. The inclusion of the beginning and ending totals of retained earnings is desirable primarily as a means of linking together the income statement and the financial position statement. However, in view of the fact that accumulated retained earnings may be large in amount, and have the general significance of invested capital rather than reflecting funds available for distribution, there may be less danger of misleading the reader if the income statement ends with the amount of current earnings retained.

There is considerable support in accounting circles for the view that extraordinary losses or gains, having little relation to operating activities, should be reported as direct adjustments of earnings retained rather than as revenue deductions or credits. The form shown does not specifically provide for this possibility and is designed to discourage exclusion of such items from the income reckoning. However, it is recognized that in exceptional circumstances a fairly strong case can be made for the exclusion procedure. In any event there should be full disclosure.

Footnotes and Comments. Where carefully chosen titles and parenthetic explanations on the face of a statement, coupled with discriminating arrangements, are insufficient to clarify particular matters or where supplementary factors and conditions are present that have a bearing on the statement, it is necessary to resort to footnotes or accompanying comments. In published statements the use of qualifying and explanatory notes has been marked in recent years, in part as a result of the influence of the requirements of the Securities and Exchange Commission, and in general this development is to be viewed as desirable. It is true that where a statement is burdened with a lengthy list of numbered comments, without organization or a connecting thread of discussion, the reader may become lost and fail "to see the town for the houses." But it is also true that under the present complex conditions of business organization and operation statement captions and attached amounts are often quite inadequate as a basis for understanding.

The principal occasions and reasons for the use of explanatory notes are as follows: (1) to explain bases of valuation; (2) to refer to contingencies and other matters which have a bearing but which cannot be conveniently displayed in the body of the statement; (3) to call

attention to a special change or unusual situation; (4) to amplify statement captions where this is needed; (5) to point out alternative treatments in the case of debatable situations.

In some situations supplementary discussion should go far beyond the listing of various notes, and should consist of a well-knit analysis of the conditions reflected in the statement proper. Such an analysis, indeed, may be carried to the point at which it represents in itself a "financial statement" of much greater significance and value than the conventional tabulated report.

Supporting Schedules. A highly technical type of supporting schedule is that which displays the composition of a general-ledger balance in terms of the accounts appearing in the corresponding subsidiary ledger. These are prepared by the accountant in connection with periodic audits and reconciliations and usually are not presented—in their original form, at any rate—as exhibits accompanying published financial reports. The most familiar examples associated with position-statement data are the schedules of accounts receivable and payable, and the tabulations of stores and plant ledgers. Compilations of underlying cost or "expense" ledgers are the most common form of supporting schedule of this character associated with the income statement. Another class of technical supporting schedule is that represented by the periodic "working papers" prepared by the accountant.

In addition schedules are often prepared expressly to supplement published financial statements. Such schedules may be restricted to a bare list, in more or less detail, of the components of a particular figure or figures appearing in the statement, or they may represent something by way of special analysis and arrangement and hence deserve to be rated as subordinate reports. They include summaries of plant additions and retirements, classification of inventories with special reference to bases of valuation, analyses of retained earnings, lists of investments, details of organization costs, computation of "cost of sales," statements of securities issued or retired during a particular period, display of revenues by principal divisions, exhibit of changes in working capital, and so on.

Consolidated Statements. A combined or consolidated statement is designed to show the condition or affairs of two or more related business entities as a single enterprise. In a sense the complete reports of a single legal entity which embraces two or more distinct

departments or branches are "consolidated"; it is customary, however, to restrict the term to statements representing the joint picture of affiliated but legally distinct corporations. The term "group statement" is sometimes applied to the combined reports of associated units where the control does not lie in any one of the units. The clearest case for the issue of consolidated statements is found where a dominant corporation and one or more wholly owned subsidiary companies are engaged in integrated activities under a common general management. Where the intercompany ownership of a corporation is substantially less than 100%, or where the concern is unrelated to its affiliates from an operating standpoint, the need for consolidated reports is less evident and in particular situations their use may be unwise. However, the final test is expediency, and wherever it can be demonstrated that parties legitimately interested will find consolidated reports illuminating and useful there can be no sound objection to their preparation and presentation, with full explanation of the conditions, even if the party or parties immediately in control represent less than the traditional 50+% of stock ownership.

Consolidated corporate statements are useful primarily to the management and investors of the parent or dominant company as a means of displaying the composite situation in its relation to the outside business world. This does not mean, however, that such statements are a substitute for the reports of the parent company as such; instead they should be viewed as a supplementary device. The legal-entity statements of the controlling corporation should always accompany the combined statements where there are major differences between the two pictures; and where no important differences exist (due to the relatively small size of the subsidiary or subsidiaries) there is little to be said for the presentation of consolidated reports. Moreover, consolidated statements are of slight value to the minority stockholders and to the creditors of the subsidiary companies, and hence do not in any sense supplant the regular financial statements of such corporations. Consolidated statements should always be read for what they are, which means that impressions as to earning power, working-capital position, capital structure, etc. gleaned from such reports should not be taken too seriously.

The essential technical step in the preparation of consolidated statements is the elimination of all intercompany elements. With respect to the position statement, this means the cancellation of intercompany receivables and payables, long-term as well as short-term, and the suppression of the stock equities of subsidiaries, to the extent

that these equities are covered by intercompany holdings, together with the corresponding investment accounts. In the income statement it means the cancellation of intercompany purchases and sales, and all other overlapping income charges and credits, including dividends on intercompany stock. Among the numerous problems arising in this process of elimination is the measurement and treatment of the difference between the cost of subsidiary stock held within the affiliated group and the book value of such stock on the date of acquisition. Where the cost exceeds book value the difference may be due to understatement of the cost of subsidiary assets, existence of unrecognized appreciation, or exceptional subsidiary earning power; where the difference is in the other direction the explanation may similarly be found in overstatement of the cost of subsidiary assets, inadequate depreciation accruals, unrecognized special losses, or lack of earning power. In the consolidated statement the reconciling figure should be clearly reported in the light of the conditions actually obtaining. Another important problem is the treatment of intercompany income (or loss) associated with assets, either current or fixed, that have been transferred from one affiliated corporation to another. According to the usual view the book value of such assets should be decreased (or increased) in the consolidated statement to the amount of cost incurred by the transferor. However, the process of adjustment in such cases presents many technical difficulties and there is some opinion to the effect that disclosure of the fact of intercompany transfers, without adjustment, is adequate.

The fact that for purposes of consolidated reports the effects of intercompany purchases and sales are eliminated has no bearing on the question of the validity of such transactions from the standpoint of the accounts of the respective companies. Transactions between related corporations are just as significant to the companies involved, and have the same effects upon financial position and earnings, as transactions with outsiders—assuming that they are carried out on the basis of existing market values. It may be added that a transfer of services or property from one company to another, whether or not the concerns are closely related, on any basis other than that of prevailing market value is basically improper, as such action will presumably produce inequitable effects upon the rights of some of the parties at interest and may also lead to unwise administration of resources.

In some cases of affiliated companies are found the conditions of indirect ownership (two or more levels of subsidiaries) and mutual

ownership (holding of dominant company shares by subsidiary), and the process of preparing consolidated reports under such conditions may be difficult and time consuming.

Consolidated Position Statement Illustrated. Although any serious consideration of the process of consolidating is beyond the scope of this book the presentation of a simple example of a consolidated statement of financial position may help to make more clear the preceding comments on the nature and general significance of consolidated reports.

M Co. owns 80% of the stock of R Co. acquired at a cash cost of $75,000 as of the beginning of business January 1, 1949. At that time the accounts of R Co. show formal capital of $100,000 and earnings retained of $5,000. During 1949 half of R Co.'s total sales of $200,000 are to M Co. and M Co. owes R Co. $1,000 on account at the end of the year. On December 31 M Co.'s inventory includes merchandise acquired from R Co. that cost M Co. $10,000 and that cost the vendor, including all charges, $9,750. R Co. neither declared nor paid any dividends during 1949. Following are condensed data of financial position for the two companies on December 31, 1949, after adjusting and closing entries, with eliminations and consolidated data:

	M Co.	R Co.	Eliminations	Consolidated
Cash	$ 15,000	$ 10,000		$ 25,000
Receivables	30,000	20,000	$ 1,000	49,000
Inventories	50,000	30,000	200	79,800
Investment in R Co. Stock	75,000		75,000	
Land	30,000	20,000		50,000
Buildings and Equipment	80,000	60,000		140,000
Allowance for Depreciation	20,000(1)	10,000(1)		30,000(1)
Excess of R Co. book value over cost of R Co. stock			9,000	9,000(1)
	$260,000	$130,000	$85,200	$304,800
Accounts payable	$ 30,000	$ 15,000	$ 1,000	$ 44,000
Accrued liabilities	10,000	5,000		15,000
Capital stock	200,000			200,000
		100,000	80,000	20,000(2)
Earnings retained	20,000			20,000
		5,000	4,000	1,000(2)
Subsidiary earnings since acquisition		5,000		4,000
				1,000(2)
M Co. share of intercompany profit in inventory			200	200(1)
	$260,000	$130,000	$85,200	$304,800

(1) Deduction. (2) Minority equity.

In this example the compromise procedure is followed of permitting the minority share in book value at the date M Co. acquired 80% of R Co. stock to stand at book value, without regard to the price paid by M Co. for the shares acquired. An alternative, favored by some accountants, would adjust the minority book equity of $21,000 to 20% of the implied total value of $93,750 (100% is worth $93,750 if 80% is worth $75,000), or $18,750, increasing the balancing "excess . . ." accordingly. Similarly the entire intercompany profit attaching to M Co. inventories, $250, might be eliminated, by reducing the minority share of "subsidiary earnings since acquisition" by $50.

Following are the consolidated data in statement form:

M COMPANY AND SUBSIDIARY R COMPANY

Consolidated Position Statement

December 31, 1949

Assets

Current:			
Cash		$ 25,000	
Receivables		49,000	
Inventories(1)		79,800	$153,800
Fixed:			
Land		$ 50,000	
Buildings and Equipment	$140,000		
Less Allowance for Depreciation	30,000	110,000	160,000
			$313,800
Excess of book value of R Co. shares at date of acquisition over cost of such shares to M Co.			9,000
			$304,800

Equities

Current Liabilities:		
Accounts Payable	$ 44,000	
Accrued Liabilities	15,000	$ 59,000
Long-Term Liabilities		–0–
Minority Equity in Subsidiary		22,000
Equity of Stockholders:		
Capital Stock	$200,000	
Retained Earnings (including equity in subsidiary earnings since acquisition of $3,800)	23,800	223,800
		$304,800

(1) After deducting majority share of intercompany profit in inventories, $200.

As indicated earlier, the nature of the balancing "excess . . ." should be disclosed wherever the available data make this possible. In this presentation the minority equity is shown as a single figure

on the theory that the consolidated statement is of interest primarily to the management and stockholders of the dominant company, rather than to minority stockholders of subsidiaries. According to this view the statement of R Co. is the place to look for the details of the stock equity of that company.

Specialized Statements. Situations sometimes arise which justify the preparation of financial statements that are hypothetical in that they include the results of transactions contemplated or predicted but not fully consummated. The most familiar case is the position statement designed to show to interested parties the effect of proposed new financing. Such a statement usually follows the regular form, but a special heading is required to make plain its hypothetical character. Another example is furnished by the forecasts of financial position or income prepared in statement form in connection with budgetary programs. Forecast statements epitomize the underlying budgets of sales, production, overhead costs, construction, cash, etc.; and they should be prepared systematically on the basis of the underlying compilations and estimates. A formal work sheet that includes the ledger condition at the beginning of the budget period and an abstract of estimated transactions for the period may be used to advantage.

Cash reports, as has been indicated, are a supplementary type of statement, not on a level with the major accounting reports. Nevertheless such reports are still the principal form of statement issued by many governmental units, quasicommercial undertakings, and insurance companies.

The "statement of affairs" prepared in connection with liquidation proceedings is essentially a position report which emphasizes cash realizable values, the positions of the principal groups of creditors, and the excess of the amount realizable over the total of the obligations (or vice versa). Receivers and other court appointees must of course make final reports of their activities, in prescribed legal form.

Mention was made earlier of financial reports to governmental agencies, outstanding examples of which are income-tax returns and security registration statements. In general such reports follow a set form too specialized for other purposes. In the railway and other utility fields, operating under prescribed classifications of accounts,

specialized reports are required by the regulating authorities. In these fields, moreover, the forms of reports regularly issued to stockholders are strongly influenced by governmental requirements.

Special forms of financial statements are prepared for credit purposes, in reporting to trade associations, to accompany an application for stock listing, and in numerous other connections.

Questions

1. What are the two main types of financial statements?

2. What are the principal considerations that should control the form and content of financial statements?

3. Explain the relationship between statement headings and ledger titles. Indicate the significance of the position statement to the various parties concerned.

4. How should the "values" of the main groups of assets presented in the position statement be interpreted? Show that some types of factors having an important bearing on financial position cannot be readily disclosed in conventional statements.

5. List five tests that may be applied in distinguishing fixed and current assets and illustrate the application of each.

6. List the five main classes of current assets. Under what five heads may fixed assets be classified? Give specific examples of each.

7. How should each of the following be dealt with in statement presentation: (1) cash in closed banks; (2) loans to officers and employees; (3) separate bank balances; (4) marketable securities; (5) cash on hand; (6) allowances for bad debts; (7) office supplies; (8) damaged goods; (9) bonds held in sinking fund; (10) investments in affiliated companies; (11) land; (12) cost of buildings and equipment; (13) appreciation of depreciable assets; (14) accrued depreciation based on cost; (15) organization costs; (16) cost of patents.

8. Discuss the presentation of liabilities, including accruals, "reserves," long-term obligations approaching maturity, bond discount and premium, and contingencies.

9. With illustrative figures present an outline of the presentation of capital and retained earnings in the position statement including treatment of preferred stock, paid-in "surplus," appropriated retained earnings, and adjustment from revaluation.

10. What is the general character of the income statement? Which of the major statements, in your judgment, is the more important to the stockholder?

11. Outline the content and arrangement of the income statement, including attention to question of departmentalization of sales, adjustments for discounts and bad debts, interest and dividends earned, depreciation, expense classification, interest charges, gains and losses, dividend declarations, and retained earnings. What are the three main groups of revenue deductions?

12. Point out the objections to the striking of intermediate "profit" figures in the income statement.

13. What are the principal purposes of explanatory footnotes and comments?

14. Discuss the use of supporting schedules.

15. Define the "consolidated statement." When should such statements be prepared? To whom are they most significant? Are consolidated reports a substitute for legal-entity reports?

16. Outline the main features of the process of preparing consolidated statements.

17. Give several examples of specialized financial statements.

XL

INTERPRETATION OF STATEMENTS

Importance of Statement Analysis. In the preceding discussion of the content and presentation of statements the importance of making the data as intelligible and significant as possible was stressed, and the possibilities of promoting these characteristics through the use of adequate captions, discriminating arrangement, explanatory comments, and supporting schedules were suggested. In this and the next chapter it is necessary to explore the subject of interpretation further. Financial statements become truly useful only as they are made to convey definite meanings in accord with the essential facts of the enterprise and thus promote a pattern of thinking on the part of those interested conducive to efficient, equitable administration. Bare figures are often of little value; they must be made to "speak." It follows that the accountant can reasonably devote serious thought and effort to the question of interpretive devices and methods.

The art of analyzing the financial statistics of business enterprises has hardly kept pace with the improvement in underlying techniques and methods of compilation. For the larger enterprises at any rate the required basic data are commonly available in usable form, or might be made so available without any considerable revamping of procedures and with no marked increase in expenditures, but the means of presenting and translating the data for the benefit of those concerned, with particular reference to stockholders and other investors, are still neither fully developed nor generally employed. Public accountants often have been preoccupied with problems of auditing and have been somewhat slow to elaborate the traditional methods of reporting. Another restricting influence has been the tendency on the part of some managements to be reluctant to accept

responsibility for supplying complete information to the rank and file of stockholders—a tendency sometimes condoned on the ground that the typical investor is not interested in financial details and in any event is incapable of understanding the complex conditions of the modern enterprise. In recent years, on the other hand, there has been an increasing recognition of the fact that those who furnish the funds are entitled to full and clear reports of activity and financial position. Many corporations are showing an active interest in the improvement of financial reporting, and marked progress has already been made. Professional organizations, financial institutions, and governmental agencies are also giving more attention to the problem. With the development of investment trusts and other forms of organized investing, moreover, there has been an increasing pressure from investors and their technical advisers for more complete and analytical financial data.

Interpretive devices are perhaps even more important to the immediate management than to the stockholders and creditors. In the large enterprise, in particular, it is impossible for the general management to come to grips with either the details or the essential outlines of the business without the aid of a stream of analytical data. In this connection it may be noted that business officials sometimes imagine that they as "insiders" are fully informed, when as a matter of fact their knowledge of underlying relationships and financial movements is by no means clear and complete.

Statement of Working Capital. The supplementary statement or analysis of working capital is sufficiently important to deserve classification as an analytical device. In its simplest form this statement consists of a comparison of current assets and current liabilities, with the difference displayed as working capital (or working deficiency). Following is an illustration taken from a published report:

	3/31/49	3/31/48
Cash in banks and on hand	$ 962,615	$ 161,851
Marketable securities		300,000
Accounts receivable (net)	1,105,431	675,207
Inventories	969,696	826,413
Other current assets	44,961	27,088
Total current assets	$3,082,703	$1,990,559
Total current liabilities	1,559,499	914,192
Working capital	$1,523,204	$1,076,367

The composition of gross working capital may be emphasized by indicating the percentage each class of current asset is to the total of current assets. The statement may also include a computation of excess "quick" or highly-liquid assets over total current liabilities. The hypothetical example on this page includes these features.

The upper section of the ordinary position statement, arranged in account form and with items running from current to fixed, represents a form of statement of working capital. It is the "current-account" balance sheet as opposed to the "capital-account" balance sheet. In this connection there is something to be said for a revival and extension of the old practice of presenting the position statement

M Company

Statement of Working Capital

December 31, 1949

			%
Liquid Assets:			
Cash on Hand and in Banks		$ 50,000	16.67
Marketable Securities (at current market prices)		100,000	33.33
		$150,000	
Current Liabilities:			
Accounts and Notes Payable	$30,000		
Payrolls	5,000		
Interest, Taxes, and Other Accruals	15,000	50,000	
Excess of Liquid Assets		$100,000	
Other Current Assets:			
Accounts and Notes of Customers	$75,000		
Less Allowances for Bad Debts and Other Adjustments	5,000	70,000	23.33
Inventories (valued at cost)		75,000	25.00
Current Prepayments (unexpired costs)		5,000	1.67
Working Capital		$250,000	
Total Current Assets		$300,000	100.00

in two connected parts, with the net working capital of the current section being used to balance the capital section. At any rate it is important that readers of financial reports realize that the position statement includes the data of two very distinct types of resources: (1) those representing actual purchasing power or which can or will shortly be converted into money; (2) long-term commitments in land, buildings, and other facilities of production. Much of the controversy and misunderstanding with respect to the significance of the position statement grows out of a failure to realize that it is virtually a double-purpose type of report.

Comparative Statements. In the presentation of the financial statistics of the enterprise the use of the comparative statement is becoming increasingly common. Such statements consist essentially of columnar exhibits of the data for two or more successive periods arranged to facilitate comparison of congruous items. A feature of many "two-period" reports is the display of differences—increases and decreases.

The extent and direction of the changes may be emphasized by determining and displaying the percentage which each element is of the corresponding figure for the base period (usually the first of the two or more periods under consideration). In a two-year comparative position statement, for example, if the amount of cash at the end of the earlier year is $50,000, and the cash balance a year later totals $60,000, the index number or percentage for the second year is 120. Another method of indicating changes is by showing the comparative data attaching to particular headings as percentages of some general base. For example, if amounts of sales in a given concern for 1949 and 1950 are $500,000 and $600,000, respectively, and the figures for selling expenses for the two years are $50,000 and $54,000, respectively, the comparative percentages (selling expense to sales) are 10 and 9.

The special importance of the comparative statement lies in the fact that changes are often more significant than the underlying amounts, especially where the changes are of such a character as to represent tendencies or trends. The accountant must make use of estimates, judgments, valuations, in various connections, and consequently many of the figures presented in his reports have a limited quantitative validity. This is particularly true of the values attached to specialized plant assets and the charges to operation representing estimated expiration of such values. Granting, however, that the practices followed are reasonably sound and are consistent from year to year, the trends of primary financial elements and relationships may represent dependable evidences of financial processes and conditions.

Cumulative and Average Statements. The fluctuations in revenues, expenses, and earnings shown by the short-period income report are often very sharp and the desire on the part of business managements to minimize these movements and show a greater stability of earning power has sometimes led to the use of such questionable practices,

for example, as the arbitrary expansion and contraction of depreciation charges or varying procedures in computing cost of sales and inventories. What is needed in this connection, however, is not an artificial stabilizing of results as shown by reports for particular periods of a year or less, but a more complete recognition of the limitations of short-run statements and further development and use of long-period, cumulative reports and reports showing average results. That is, an illuminating supplement to accompany the income statement for the particular period, or one exhibiting the data for several consecutive periods, is a statement showing the combined figures for the past three to five years, together with a schedule of averages. The assumed example shown on this page suggests the character of this type of report.

Monthly tabulations of income data, particularly in connection with internal administration, often provide for comparison of current month with corresponding month of preceding fiscal year, and cumulative figures for current "year to date" with corresponding totals of preceding year.

M Company

Condensed Comparative Income Statement
Years Ended December 31, 1948, 1949, 1950
(With cumulative and average figures)

	1948	1949	1950	Cumulative	Average
Net Sales	$7,500,000	$6,000,000	$10,500,000	$24,000,000	$8,000,000
Other Income	300,000	100,000	200,000	600,000	200,000
Total Revenues	$7,800,000	$6,100,000	$10,700,000	$24,600,000	$8,200,000
Expenses	$6,000,000	$5,200,000	$ 8,600,000	$19,800,000	$6,600,000
Losses	100,000	300,000	200,000	600,000	200,000
Taxes	500,000	160,000	600,000	1,260,000	420,000
Total Revenue Deductions	$6,600,000	$5,660,000	$ 9,400,000	$21,660,000	$7,220,000
Net Income	$1,200,000	$ 440,000	$ 1,300,000	$ 2,940,000	$ 980,000
Interest Charges	200,000	140,000	200,000	540,000	180,000
Earnings of Stockholders	$1,000,000	$ 300,000	$ 1,100,000	$ 2,400,000	$ 800,000
Dividends	800,000	500,000	800,000	2,100,000	700,000
Earnings Retained	$ 200,000	$ 200,000*	$ 300,000	$ 300,000	$ 100,000

* Negative.

In some circumstances special reports covering the entire history of the enterprise from date of organization are useful. Such a re-

port may show totals for all the principal elements of the income statement or may be confined to net income, dividends, and retained earnings. In some cases a summary record of the entire stockholders' equity, including capital as well as earnings, is a helpful exhibit. Another form of historical cumulative statement is that of receipts and disbursements. This type of statement is often of value in focusing attention upon the course of events through a considerable period as reflected in cash transactions.

Financial Ratios—Principal Types. In general a financial ratio is simply a definite expression of the quantitative relationship of two distinct elements or factors or of two aggregates or groups of elements. Ratios may be stated by common fraction, decimally, or in percentage form. Thus if officers' salaries in a given concern for a particular period amount to $100,000 and sales for the same period total $5,000,000 the ratio of the two elements is 100,000/5,000,000, .02, or 2%. The percentage form is the most common mode of expression. The amount of officers' salaries, to state the ratio just given in full, is equal to 2% of total sales. The significance of ratios in the interpretation of the data of financial reports rests on the assumption that relationships may be more important than individual amounts or, at any rate, that relationships are in themselves facts of intrinsic importance. This does not mean, it should be added, that all possible comparisons of the data of the enterprise can be expected to yield valuable information.

In terms of the principal statements financial ratios can be classified under three main heads: (1) position-statement ratios; (2) income-statement ratios; (3) ratios involving both statements.

Equity Ratio—Long-Run Solvency. The position statement furnishes two ratios, or groups of ratios, of first importance. One of these is the equity ratio. This ratio expresses the relation of the two main types of equities, creditor interests and proprietary interests, to the total resources of the enterprise. It may be stated in a number of ways of which the following are the principal variations: (1) total stock equity (in the case of the corporation) to total assets (valuation reserves having been deducted); (2) total stock equity to total of liabilities; (3) total liabilities to total assets. The first form is in general the most effective as it represents a clear-cut answer to the question: What part of the total resources is furnished by or represented by the proprietary interest—the stock equity? The second

method of presentation, often referred to as the "worth-debt" ratio, is widely used but is a less clear means of stating the underlying relationship. The third arrangement, the complement of the first, places the emphasis on the percentage of liabilities.

The equity ratio is a means of focusing attention sharply on the question of long-run solvency. In general a high percentage of proprietary capital indicates that the danger of liquidation or reorganization as a result of defaulted obligations is correspondingly small. Undoubtedly in many enterprises which survive protracted lean periods without serious embarrassment the favorable capital structure is a fact of outstanding importance. On the other hand it should not be assumed that a high equity ratio in itself demonstrates a strong working capital position or a favorable situation with respect to earnings, either in the past or in the future. Moreover, the possible advantage to the proprietary interest of "trading on the equity" to a reasonable degree—an advantage which has been greatly overemphasized in some quarters—must not be entirely overlooked.

Various subordinate ratios under this general head may be computed. Thus the relationship of the equity of a particular type of liability, or of a particular class of stock, to the total assets may be of interest in certain cases. Another example, of minor importance in most situations, is the percentage of retained earnings to total assets.

Current Ratio—Interpretation of Working Capital. The second main type of relationship found in the ordinary position statement is the current ratio. In traditional form this relationship is found by dividing the amount of current assets by the amount of short-term liabilities. Thus if the current assets as reported on a particular date total $1,000,000, while the current liabilities at the same time amount to $250,000, the current ratio is 1,000,000/250,000 or 4 to 1. An alternative and intrinsically more satisfactory method of comparison—but one not used in practice—is to state the ratio as the percentage of current assets to current liabilities or, still better, the percentage of current liabilities to current assets. What is desired is a clear expression of the extent to which current assets are covered by short-term liabilities and the relative margin of working capital, and percentage data, with the amount of current assets taken as the base of 100, meet this need effectively. Using the above figures, for example, it appears that current liabilities amount to 25% of current assets, the remaining 75% representing working capital.

The current ratio has long been considered important as a test of immediate solvency, and no doubt has real significance in this connection. However, the conventional measure of 2 to 1 as a generally satisfactory relationship has been overemphasized. Working capital requirements naturally vary between enterprises and between periods in the particular concern, and the question as to the amount of current resources needed and what constitutes a proper quantitative relationship between such resources and the short-term obligations must be settled on its merits in the light of all attendant circumstances. The importance of large backlogs of liquid assets to meet depression conditions, and to make it possible to take advantage of new developments, has been widely stressed in recent years.

Since some types of current assets are not highly liquid a more severe test of the status of working capital is often applied. This is usually referred to as the "quick" ratio, and consists of a comparison of the total of cash, marketable and available securities, and first-class current receivables with the amount of short-term obligations. This test emphasizes the relationship of purchasing power which is either immediately available or can be readily marshalled to the total of all claims immediately payable or shortly to become payable. In some cases it may be desirable to compute the ratio of cash on hand and in bank to total current liabilities.

The current ratio has its limitations as a device for assaying working-capital position. It affords no qualitative test of current assets; it does not directly take account of the effect of probable cash receipts and liability changes in the near future. In using the current ratio, moreover, care must be taken to avoid stressing unduly momentary position, as indicated by the ratio on a particular date; in reaching a conclusion there should be numerous observations and adequate attention to averages and trends.

A special question in this connection is the treatment of bonds or other long-term obligations which are maturing shortly. Should the amount of such liabilities be included in current obligations in computing the current ratio and interpreting working-capital position? In general the answer is that such liabilities should be excluded provided any funds with which payment is to be made and that are already accumulated are excluded from current assets. Likewise cash funds on hand but dedicated to construction or other non-current purposes should be excluded. In all cases all special conditions should be carefully noted in interpreting current position.

Operating Ratios. The operating ratio, the relation of the total of expenses to total revenue, is usually deemed to be the most important income-statement ratio. This ratio represents the percentage of net sales or other form of revenue consumed by cost requirements, and is closely watched by management. If, for example, revenues amount to $1,000,000 and expenses applicable thereto total $750,000, the operating ratio is 75%. In general the lower the operating ratio, the better, but it should be recognized that an apparently favorable condition at this point does not demonstrate a high level of earning power.

The "operating" ratio in the broadest sense is computed by comparing the total of all revenue deductions, including losses and taxes, with the total of all revenues, including unusual gains. This calculation may be less significant to internal management, however, especially if special charges and credits are present in large amounts. Where a business has a number of distinct departments or divisions it may be useful to determine the relation of department or division costs to the corresponding revenue totals. The validity of such a ratio is of course limited by the difficulties in the way of making satisfactory allocations of certain kinds of expenses and other revenue charges.

The relation of any broad group of charges—or of any specific expense—to revenue may be viewed as a subordinate operating ratio. Examples are merchandise cost of sales—or factory cost of sales—to sales, selling expense to sales, depreciation and maintenance to sales, administrative salaries to sales, and collection expense to credit sales. Charts showing the composition of the revenue dollar often emphasize a number of these percentages. Such ratios are of particular interest to operating management; effective control of costs involves close observation of relationships as well as amounts.

The percentage of "gross margin"—the spread between the assigned cost of goods sold and sales—to sales represents an allied relationship. This ratio has a limited significance for the enterprise as a whole but is of value in departmental statistical analysis.

The subordinate ratios are sometimes useful in detailed studies of credit position and in special analyses along lines of internal administration. Further, comparisons which have little general significance are often important in audit programs, as a means of bringing to light conditions of fraud or mismanagement. The first clue to a serious state of affairs may be an unusual situation with respect

to a very commonplace financial relationship, and the discriminating auditor is always on the lookout for such signs.

Earning Power. The outstanding ratio based upon the data of both of the principal statements—and the most important of all financial ratios—is the earning rate. This ratio has two main forms: (1) the rate of earnings on total resources employed; (2) the rate earned on the total equity of proprietors or stockholders. The first of these expresses the degree of success achieved by the enterprise as an entity without reference to the form of capital structure employed; it measures earning power from the standpoint of all capital invested, regardless of source. This earning rate is especially useful in comparing enterprises having different forms of capitalization, and in comparing different periods in the history of a particular enterprise which has undergone changes with respect to the relative amounts of borrowed and proprietary capital. The second type of earning rate expresses the relation of the net earnings available to the proprietary equity, after all interest charges and income taxes, to the amount of such equity, including retained earnings as well as original investment. This rate is more widely used in financial analysis than the rate of earnings on total capital, in part because of general lack of understanding of the importance of the other form of computation, and in part because of the inadequacy of the data commonly available.

Ascertaining Enterprise Earning Rate. In the computation of the "all-capital" or enterprise earning rate a number of problems arise with respect to both numerator and denominator. In the first place what disposition should be made of unusual credits and charges in computing the net income figure for the particular period? The answer to this question, in general, is that all revenues and gains, and all expenses, losses, and taxes, must be taken into account in determining the amount earned by those providing the funds—the private investors. However, in some situations it may be desirable to compute an alternative ratio, from which the effect of extraordinary items has been eliminated, in order to show what the results of operation would have been in the absence of exceptional conditions. For example, if a company sold important fixed assets in a particular year, realizing a large amount of loss or gain, the influence of this transaction might be such as to render the resulting

earning figures misleading unless they are accompanied by qualifying explanations and computations.

Second, in computing total resources should assets not in active use or not closely associated with the main operating activities be included? This question should be settled in a manner that harmonizes with the measurement of net earnings. If all revenues and deductions are taken into account in computing earnings a correspondingly broad definition of applicable resources should be employed. Stand-by facilities should be included as well as plant used at less than maximum capacity. Likewise adjustments of current resources are generally not called for, even where such assets are present in unusually large amounts. Abandoned property and other items that should have been written off under proper accounting standards should of course be excluded. In this as in other connections care should be taken to disclose special conditions, and indicate the necessary qualifications, in using earning rates comparatively.

Third, how should liabilities such as book accounts, payrolls, etc., not explicitly sharing in net earnings, be dealt with? Such liabilities often represent the source of a considerable fraction of the total capital—in the broad sense—employed by the enterprise, and where this is the case, and the total resources are compared with the total net earnings available to interest-bearing creditor capital and proprietary equities in measuring earning power, an obvious distortion results. That is, a fraction of which the numerator is the amount of net earnings to all capital excluding that represented by non-interest-bearing liabilities, while the denominator is the total of all employed resources regardless of origin, does not reflect the true earning level of the enterprise. In view of this situation an adjustment is recommended wherever feasible. This may take either of two forms. One possible procedure consists of the reduction of the amount of resources used by the amount of liabilities representing equities not explicitly participating in earnings. An alternative—and more refined—procedure involves estimating the implicit interest earned by the capital requiring no explicit return and the inclusion of such estimated interest in the net earnings which are compared with the total resources. This alternative form of adjustment rests on the assumption that interest on accounts which appear to bear no interest is included in the prices of the goods and services which are acquired through such accounts—an assumption which can in gen-

eral be justified without great difficulty—and that such implicit interest should accordingly be taken out of costs and included in net earnings of all capital. The commercial bank rate is presumably the appropriate rate of interest to be used in making the estimate.

In comparing the apparent earning rates of different concerns it must be remembered that valuation bases often vary between enterprises and that even where assets are recorded at cost the data of resources are not fully comparable because of the varying dates of acquisition and the different price levels consequently involved. Depreciation and maintenance policies and inventory methods likewise differ sharply, even among enterprises in the same line of business. Another point of variation lies in the extent to which intangible values are recognized. With respect to the measurement of income, moreover, a wide range of practices is found, particularly in accounting for expenses. In view of such features of the reported information care must be exercised in interpreting and utilizing earning rates drawn from published statements. It should be added that where the asset data used are materially out of line with current values the computed rates have little or no significance.

Ideally the amount of resources to be compared with the amount of earnings should be the average employed or applicable for the period, and evidently such an average cannot be computed from the data of a single statement. Applying earnings for the period to the resources reported as of the end of the period is inaccurate in that it ignores the fluctuations in assets, seasonal or otherwise, which have occurred, and may yield a serious misstatement in the case of a rapidly growing or declining enterprise. The greater the number of observation points available the more satisfactory will be the estimate of employed resources, although averages drawn from the data of two successive statements are adequate in many cases.

Proprietary Income and Dividend Rates. The problem of dealing with special loss and gain items arises in the computation of the proprietary earning rate as well as in the determination of the "all-capital" rate, and should in general be settled along the line indicated above. It should also be recognized that the amount of the proprietary equity, like the amount of employed resources, depends in considerable measure upon the bases and policies of asset valuation in effect, and that it is accordingly necessary to exercise care in

making use of rates computed under unusual conditions of valuation.

The denominator of the fraction representing the proprietary earning rate should be the average proprietary equity for the period, taking into account the effect of accruing losses or earnings, dividend appropriations, and new investment or reduction of capital. Often it is difficult to make a fully satisfactory computation from the data available in published statements.

In the case of a corporation with one or more issues of preference stock the distinction between the rate earned on the entire stock equity and the rate earned on the equity of the common stock must be recognized. A complication arises in this connection where the preferred stock has participating features and where it may accordingly be necessary to treat a part of retained earnings as attaching to the senior security. In some cases it is very difficult to make an apportionment that is clearly in accord with all the conditions. The rate of income on common stock equity is an outstanding ratio in corporate finance. The rate of income to par or stated value is usually not important; the proper base is the total amount of the equity.

Differential earning rates are of interest in some circumstances. The rate a particular enterprise is earning, for example, over representative concerns in the same line is useful in emphasizing the preferential position of the enterprise. Another differential rate of significance is the amount by which the particular proprietary rate exceeds the ordinary rate of interest on long-term business borrowings. Deficiencies in rates actually earned may also be calculated by comparing such rates with appropriate standards.

The dividend rate—the percentage represented by the relation of amount of dividends to the book amount of the equity—is of considerable importance in the investment field. By the "yield" rate, however, is usually meant the relation of the annual dividend to the prevailing market price of the stock. Dividends are also frequently referred to in terms of dollars and cents per share. The rate of dividend to par or other formal value is not a very significant fact, particularly in the case of the common stocks.

Computation of Earning Rates Illustrated. An example will serve to make the foregoing comments on the measurement of earning power more definite. The data of the example appear on page 822.

Treating the allowances for depreciation and bad debts as contra-

M COMPANY

Comparative Position Data

Debits	December 31 1949	December 31 1950
Cash	$ 10,000	$ 15,000
Marketable Securities	50,000	100,000
Receivables	40,000	30,000
Inventories	60,000	50,000
Other Current Assets	5,000	5,000
Land	30,000	30,000
Buildings and Equipment	100,000	105,000
Organizing and Financing Costs	5,000	5,000
Goodwill	70,000	70,000
	$370,000	$410,000

Credits	1949	1950
Accounts Payable	$ 20,000	$ 15,000
Notes Payable	10,000	5,000
Taxes Payable	10,000	5,000
Other Current Liabilities	5,000	5,000
Mortgage Bonds	82,500	43,000
Capital Stock—Preferred (6%)	50,000	100,000
Capital Stock—Common	100,000	130,000
Retained Earnings—Unappropriated	32,500	40,000
Reserve for Contingencies	20,000	20,000
Allowance for Depreciation	37,000	45,000
Allowance for Bad Debts	3,000	2,000
	$370,000	$410,000

M COMPANY

Income Statement

Year Ended December 31, 1950

Sales and Other Revenues (including interest and dividends on securities, $3,000)		$271,000
Expenses	$247,000	
Taxes	7,500	254,500
Net Income		$ 16,500
Interest on Bonds and Notes		4,500
Earnings on Total Stock Equity		$ 12,000
Preferred Dividends		4,500
Earnings on Common Stock		$ 7,500
Retained Earnings—Unappropriated, January 1		32,500
Retained Earnings—Unappropriated, December 31		$ 40,000

asset accounts, and including intangible and all other resources as booked, the amount of assets employed at the beginning of 1950 is evidently $330,000 and the corresponding figure for the end of the year is $363,000, which gives an average for the year of $346,500. Net income for 1950, before interest charges, totals $16,500. The

liabilities not explicitly bearing interest (apparently the accounts, taxes, and "other current" items) total $35,000 at the beginning of 1950 and $25,000 on December 31, an average of $30,000. Assuming an implicit interest rate of 6% on the average amount of such liabilities gives an estimated charge of $1,800, and adding this amount to the net income of bondholders, noteholders, and stockholders combined results in a total net, for all capital furnished, of $18,300. Dividing this amount by the average assets as computed above gives an earning rate of 5.28%. This computation assumes that changes in assets resulting from financing and from earnings occur at a uniform rate throughout the year—or in some other manner that has the same effect on average resources.

If marketable securities were viewed as non-operating assets, and were excluded from the asset base, and the earnings realized on these securities was likewise excluded from income, the average amount of assets would be $271,500 ($346,500 less $75,000), and the applicable net income would become $15,300 ($18,300 less $3,000). The "operating" earning rate on this basis is 5.64%. Aside from other limitations this calculation may be objected to on the ground that if the income on securities is omitted the amount of income taxes should be revised downward in harmony with the assumed change in earnings. In the data given income taxes are not segregated, but even if the tax figure were broken down the computation of an alternative tax charge would present difficulties. This will serve to illustrate the complications in the way of any attempt to eliminate the effects of unusual transactions or conditions. Incidentally, the increase in marketable securities accompanying an increase in total stock capital (in excess of decrease in long-term liabilities) suggests a temporary stage in a program of expansion of operating assets.

The total proprietary earning rate for 1950 is found by applying net earnings to all stockholders, $12,000, to the average of the total stock equity at the beginning of the year ($202,500) and at December 31 ($290,000), or $246,250. (This average may also be found by adding to the beginning equity of $202,500 one half the increase in total stock capital, $40,000, plus one half the net earnings, $6,000, less one half the dividends, $2,250.) This gives a rate 4.87%. In this calculation the "reserve for contingencies" is assumed to be a section of retained earnings. There is no clue in the data as to when the increase in common stock was issued, but the dividend data suggest that the increase in preferred took place at about midyear. Similarly

the rate earned on the common stock equity is found by applying the net to common stock, \$7,500, to the average amount of this equity for the year, \$171,250 (\$152,500 plus \$190,000, divided by 2), which gives a rate of 4.38%. In this computation the preferred stock equity is viewed as having no participating rights in retained earnings. Evidently the common stockholders are realizing no advantage —at least for the time being—from the fact that a relatively large amount of total capital is furnished by creditors and senior stockholders.

It should be remembered that all calculations and interpretations based on the data given are subject to any limitations inherent in such data.

Turnovers. Various turnover rates, in general requiring the use of data from both income statement and position statement, are significant in internal analysis and administration and also in the interpretation of the major reports. The volume of revenue for the period divided by the average assets employed is a ratio used to express the periodic turnover of the entire capital of the enterprise. For example, if revenues for a period total \$1,000,000 and the average assets employed amount to \$4,000,000, the periodic turnover rate is 25%. This ratio is a rough measure of capital utilization, although it should be noted that large sales in relation to investment do not demonstrate a high earning rate, and that the variation in normal capital turnover rates between different fields of business is marked. As explained earlier, the amount of average assets cannot be ascertained by reference to a single statement and all ratios of which recorded assets are a part are subject to the limitations of the asset figures. Closely related to this ratio are the turnover of working capital (revenue to net working capital for the period), the turnover of current assets (revenue to average current assets), and the turnover of plant (revenue to average amount of plant).

Credit sales are often compared with the average of outstanding receivables. If the percentage of receivables to credit sales is multiplied by the number of days in the period covered the result is a rough approximation of the average life or term of charges to customers.

Inventory turnovers, either in physical or value terms, are important primarily in analysis for internal control. Merchandise turnover is usually expressed as the relation between merchandise

cost of sales and average inventory. Some turnover calculations, including those for materials and work-in-process in manufacturing, require the use of data not ordinarily present in the principal reports. See comments on this topic in Chapters XXV and XXVI.

Minor Statement Ratios. Aside from the equity and current ratios few if any of the possible comparisons of position-statement figures have marked significance. The ratio of current assets to fixed assets is of some interest and under special circumstances it may be worth while to focus attention upon more specific relationships among the assets (for example, the ratio of accounts receivable to inventories). The relation of a contra valuation account to the gross book value of the asset to which the accumulated offset applies—for example, the percentage of accrued depreciation to the cost (or other basic value) of the depreciable property—is a type of minor statement ratio.

The amount of one class of expense to total operating charges, or to another expense subdivision, is a kind of relationship which it may be desired to emphasize in some cases. Examples are the ratio of selling expense to total operating charges or to production cost of sales, transportation charges to merchandise cost of sales, and depreciation and similar deductions to total of operating costs. In general such comparisons are less useful than those which relate costs to total revenues.

Another type of income-statement ratio is that which expresses the relation of total income available for interest charges to the amount of such charges—the number of times the interest requirement is earned. For example if the amount of net income before the deduction of bond interest, but after all prior charges have been deducted, is $1,000,000 and the interest on bonds accruing for the period is $500,000, the ratio is 200%—the interest is earned "2 times." Where preference stock is outstanding a similar calculation may be made to show the number of times the regular dividend is earned. Ratios of this type are of importance in focusing attention upon the position of particular classes of investors.

The disposition of net earnings can be emphasized by statement in percentage form. For example, if net amounts to $1,000,000 and dividends for the period total $750,000, it appears that the dividend appropriation absorbs 75% of the current earning power, leaving 25% to be retained in the business. These ratios indicate something

of the degree of conservatism exercised by the management in its dividend policy.

Many comparisons which make use of data from both major statements are possible, although the great majority have little or no significance as interpretive devices. Examples of special bistatement ratios which may be computed in particular circumstances are interest charges to total borrowings, rate of depreciation charge to book value of plant, depreciation and maintenance to plant, and insurance cost to recorded amount of assets insured. Such ratios, evidently, cannot always be derived from the data presented in condensed financial reports.

Standards of Comparison. Financial relationships expressed as percentages or otherwise have little significance except as judged on the basis of appropriate standards. It is true, for example, that the nearer the equity ratio approaches 100%, the stronger, in general, is the capital structure of the enterprise, but without some information as to what may be deemed to constitute an adequate percenage in the particular field it is impossible to form a discriminating opinion with respect to the condition of the specific enterprise. In banking an equity ratio of 5–10% is usually considered satisfactory; in the public-utility field a ratio of 40–50% is common; in many industrial companies the proprietary interest accounts for 80–90% of the total assets. Under these conditions it is quite obvious that the situation in most concerns cannot be interpreted as either unsatisfactory, adequate, or superior—to say nothing of finer gradations—without reference to standards. Similarly current position, operating ratio, earning rate, capital turnover, and other relationships as computed for the individual enterprise offer little assistance as interpretive devices unless coupled with adequate comparative data.

In developing standards as a basis for judging the affairs of the particular enterprise careful attention should be given to all pertinent information which may be available relative to other enterprises, especially those in the same field. The principal sources of such information are the files and publications of trade associations, governmental departments, bureaus of research, and credit agencies, and the numerous special studies made by investment analysts, public accountants, and others. It is of course often difficult to find data which are fully comparable with those of the specific concern under consideration. Moreover, many of the compilations available have

serious limitations due to the inherent weaknesses in the underlying materials on which they are based, and must be used with caution.

The records of past performance in the enterprise constitute an important basis for judging conditions in the current period. In the larger concerns, further, where several plants or divisions are being operated, the data of the various units, brought together in comparative form, are useful in determining standards. Another source of standards, not to be taken too seriously but not to be despised, are the informal judgments of persons in the business whose impressions are based on long experience and critical observation.

Limitations of Ratio Analysis. The enthusiasm for judging the condition and prospects of an enterprise through the use of ratios has probably gone too far in some quarters. The suggestion, for example, that a valuable gauge of financial strength can be prepared through the amalgamation of a number of ratios, each weighted more or less abitrarily, into a single index number implies that ratios have an intrinsic significance; it assumes that mere computation of ratios, if done with some arithmetic elaboration, can afford a basis for determining the standing of the enterprise. It needs to be recognized that ratios are not a satisfactory substitute for judgment. Calculation of ratios is nothing more than a means of focusing attention on relationships worthy of careful observation and study. In general ratios are clues, not bases for immediate conclusions. Even where deviations from accepted standards are disclosed either in single ratios or in ratio-trends it is not wise to assume, without further investigation, that a condition either peculiarly favorable or unfavorable is present. A high turnover rate, for example, which is usually deemed to be an indication of operating efficiency and strength, may be temporarily achieved by unwarranted price reductions, failure to maintain inventories, or other unsound policies. Similarly a high current ratio, universally regarded as a sign of strong financial position, may result from unreasonable accumulation of particular assets and may actually be an evidence of declining activity. In fact it is seldom if ever safe to make decisions with respect to the affairs of an enterprise, either in internal administration or in other connections, solely on the basis of an examination of ratios.

In employing ratios in the process of periodic analysis and interpretation, particularly in connection with the preparation and use of the principal financial statements, it must be remembered that

comparatively few of the many possible computations have any considerable significance, and discrimination must accordingly be exercised in the selection of relationships to be emphasized. The calculation and presentation of an undigested array of ratios, as a feature of a report, is likely to promote obscurity rather than clarity and understanding.

Questions

1. Indicate the importance of interpretive devices in financial reporting.
2. Describe the statement of working capital.
3. What is the special importance of the comparative statement?
4. Explain the nature and significance of "cumulative" and "average" income reports.
5. What are financial ratios? List and illustrate the principal classes.
6. What is the preferred form of the equity ratio? Indicate the general significance of this ratio.
7. Illustrate and discuss the current ratio. How should bonds maturing shortly be dealt with in this connection?
8. What is meant by the operating ratio? The percentage of "gross" margin?
9. Define precisely the two main measures of earning power, including explanation of the determination of both factors in the ratio in each case. Discuss the treatment of each of the following in this connection: (1) special gains and losses; (2) idle plant; (3) non-interest-bearing liabilities.
10. What earning rates are of interest where more than one class of stock is outstanding? What is meant by "differential" earning rates? Dividend rates?
11. Give several examples of "turnovers."
12. Give examples of minor ratios.
13. Indicate the importance of standards in the use of ratios. What are the principal sources from which standards may be derived?
14. "Ratios are clues, not bases for immediate conclusions." Explain.

XLI

INTERPRETATION OF STATEMENTS—Continued

Funds Statement. The "funds statement," referred to earlier as a type of activity report, is an important aid in bringing to light underlying financial operations and movements—the ebb and flow of funds—which are not directly revealed in reports of the position and income type, no matter how carefully prepared and arranged. In particular it is designed to reflect the relation of the revenue stream to the cash or equivalent resources of the business and to display the composition and disposition of earnings in terms of such resources. It also includes a showing of the effects of financing and of property transactions upon available funds. It is not a statement of receipts and disbursements, but it focuses attention upon the funds phase of the major activities.

The basic sources of funds to carry on the financial operations of an enterprise are revenues (including all special gains), borrowings, and additional proprietary investment. Funds may also be obtained, in a more restricted sense, through reduction of working capital or disposition of plant or other capital assets. Occasionally funds are made available as a result of gifts or other types of "windfalls." Similarly the available funds of an enterprise may be utilized in a given period to meet expenses and taxes, pay interest and dividends, reduce liabilities, retire capital stock, or to expand current or other assets. Funds may also be consumed through sheer losses or—in rare cases—outright donations.

The statement of funds is based upon the data of the position statement at the beginning of the period, the income report for the period, and the concluding position statement. (Supplementary data may also be required.) Prepared without reference to the income state-

ment—a procedure which formerly received considerable support—the statement becomes nothing more than a balanced array of position-statement increases and decreases and has little interpretive value. With the essential data of the income statement discriminatingly introduced, on the other hand, the result can undoubtedly be made definitely useful to both financial managers and investors.

The funds statement is in an experimental state in practice and no standard form has been adopted. In general a "running-account" display of the conventional income-statement type is preferable to a balanced report of so-called "sources" and "applications." The goal to be achieved in this connection is an arrangement—a threading together—of the data of essential financial processes which shall be most meaningful in view of the conditions of the particular situation. This means that with respect to the point of departure, the degree of elaboration, the internal order, and the concluding or balancing element the report of funds may well vary in form between enterprises and between years in the same concern.

In the condensed funds statement the change in net working capital is often included as a single element, the details being displayed in a separate schedule (or in a separate section of the funds statement itself). That is, the decrease or increase for the period in the amount by which current assets exceed current liabilities is treated as one definite source or application, respectively, of liquid funds. This procedure avoids cluttering the statement with the changes in the various components of working capital and usually results in a more intelligible and significant picture of the underlying developments. On the other hand this treatment implies a degree of homogeneity of current assets not found in all cases, and follows the usual assumption—not always fully appropriate—that current liabilities should be attached definitely to current assets in financial interpretation. Where the circumstances indicate that such threading together of changes in current balances does not express the essential movement of funds in the clearest possible manner some other and more suitable arrangement—in which particular types of resources or obligations are separately displayed—should be worked out.

In the funds statement as well as elsewhere the current receivables should be reduced by the full amount of the allowance for uncollectibles and other offsets which have been established.

Revenues and Costs in Relation to Funds. Strictly speaking it is the stream of collections rather than the volume of revenue (including sales on a credit basis) which measures funds made immediately available as a result of transactions with customers. But since the amount of receivables is ordinarily viewed as a liquid resource, a commitment of working capital, the revenue account is a reasonable indication of the inflow of funds in the broad sense. Where there is no marked change in the amount of outstanding receivables in the period under review, moreover, the revenue figure approximates the amount of actual collections.

It is important to recognize that operating charges absorb liquid resources in a given period only to the extent of outlays in such period—outlays either in the form of actual expenditures or the incurring of definite obligations which must shortly be liquidated. Charges to operation representing estimated accrued depreciation, depletion, and amortization of cost of patents and other intangibles—to note the principal examples—do not represent current commitments of funds (except to the minor degree that the resources involved were currently acquired). Such charges reflect the assignment to current activities of appropriate portions of past expenditures but they do not in themselves measure absorption of liquid resources in the period in which charged. Another type of charge which does not require an immediate outlay is that representing the accumulation of bond discount. The volume of revenues, accordingly, should not be reduced by such charges in computing the amount of funds currently made available thereby for various purposes. This is an important point, particularly in explaining the fact of interest and dividend disbursements in excess of reported net income.

In practice the funds statement often begins with the amount of net profit, or net profit after dividends, to which is added the total of "non-cash" expenses and income charges to determine the amount of funds provided by revenues. A better form, on the whole, is that which displays the entire application of the revenue stream.

Capital Transactions in Relation to Funds Statement. Where funds received through bond or stock issues are not applied directly to payment or retirement of outstanding security issues, or to building up accumulations of cash or other liquid resources dedicated to such payment or retirement, the amount thereof is available for plant

expansion or other purposes and should be reported accordingly. In some cases proceeds of bonds are applied to stock retirement, or proceeds from stock issues are employed to retire long-term debt. Often a showing of funds received from security issues in total, followed by a disclosure of the way in which such total is applied, is a desirable arrangement of data. Where long-term debt or capital stock is retired (or is acquired without actual cancellation) and the funds employed are secured otherwise than through new security issues, the amount utilized for this purpose should be shown as an application of funds available after other requirements are met rather than as a contra to particular sources. Pro rata distributions to stockholders in the form of liquidating dividends are a related type of fund application.

In dealing with proceeds arising from sale and other disposition of plant or other capital assets care must be taken to avoid confusion and misstatement. Where such sale or disposition involves income the amount of the proceeds representing the income must of course be reported as available funds only once. That is, if such income is included in earnings it must be excluded from the statement of the proceeds. Where a loss is involved the proper treatment is to exclude the amount of such loss, as losses representing net book value of capital assets disposed of in excess of net proceeds do not constitute in themselves a drain on current liquid funds. The amount of non-liquid property—if any—received in exchange, together with that portion of the "proceeds" represented by long-term obligations of the buyer, should be either excluded completely from the statement of funds or treated as a contra item.

As a rule the total of the charges to fixed assets during the period is the figure to be presented as the application of funds on this account. Charges representing revalutions should be excluded, however, as appreciation does not reflect current expenditures. In the case of exchanges, moreover, the charges matched by credits to fixed assets given in exchange should not be considered. There is also a question of the propriety of treating additions to plant property which are covered by long-term liabilities assumed in connection with the purchase of such property as an application of current funds, the liabilities in turn being separately displayed as a funds source. The alternative is to show the amount of the liabilities as a contra to the figure representing cost of the property acquired.

The comparative position statement, of course, shows only net in-

Condensed Position Data
As of December 31

Debits

	1949	1950
Cash	$ 122,000	$ 93,000
Marketable Securities		65,000
Receivables	293,000	294,000
Inventories	860,000	888,000
Prepayments	26,000	28,000
Real Estate Bonds	55,000	25,000
Investment in Hart Co. Stock		640,000
Land	734,000	884,000
Buildings and Equipment	2,180,000	2,120,000
Organization Costs	5,000	10,000
Goodwill	25,000	25,000
Bond Discount		5,000
	$4,300,000	$5,077,000

Credits

	1949	1950
Current Liabilities	$ 490,000	$ 511,000
Bonds Outstanding—First Mortgage	15,000	350,000
Allowance for Depreciation	713,000	883,000
Allowance for Uncollectibles	25,000	30,000
Capital Stock—Preferred	200,000	
Capital Stock—Common	300,000	525,000
Capital Contributions	252,000	402,000
Retained Earnings	930,000	1,046,000
Equity Adjustment—Appreciation	1,375,000	1,330,000
	$4,300,000	$5,077,000

Condensed Earnings Data
Year Ended December 31

	1950
Net Sales	$2,400,000
Expenses (including depreciation)	2,305,000
Interest and Rentals Earned	7,000
Dividends Earned on Hart Co. Stock	52,000
Taxes	53,000
Interest Charges	15,000
Premium Paid on Retirement of Preferred Stock	1,000
Dividends Paid on Preferred Stock	14,000
Absorbed Appreciation	45,000

Supplementary Information

(1) Real estate bonds were collected in cash during year in the amount of $30,000.

(2) Additions to buildings and equipment during 1950, at cost, amount to $10,000.

(3) Par was received for all mortgage bonds issued during the year except a block amounting to $100,000, par, which was issued on December 31, 1950.

(4) The increase in organization costs represents actual outlays made in connection with issue of securities during year.

(5) Charges to depreciation allowance during year, arising in connection with retirement and sale of equipment, total $30,000; credits amount to $200,000.

(6) The increase in "capital contributions" during 1950 results from receipt of property as a gift to Company.

(7) Expenses include net loss on retirement and sale of equipment, as of January 1, 1950, $35,000; the proceeds of this sale, in cash, totaled $5,000.

creases or decreases in fixed assets and net changes in the related contra accounts. Similarly only the net effects of security exchanges and other capital transactions are reflected in the balance sheet. The condensed income statement, moreover, often fails to furnish information as to the amount of income or loss arising in connection with the disposition of property. It follows that the preparation of a fully satisfactory statement of funds is contingent upon the availability of adequate supporting data.

Preparation of Funds Statement Illustrated. The data on page 833 are adapted from the reports and records of the Wyman Co. The statement of funds on this page is based upon the above information. This report shows, to state the essential developments very briefly, that funds were made available from operations and conversions on the one hand and new security issues on the other sufficient to leave, after retirement of preferred stock, nearly $700,000 for investment or retention in working capital, and that the major portion of this amount—$640,000—was utilized in acquiring Hart Co. stock.

Comments on Example of Funds Statement. The form employed here follows that outlined in the foregoing discussion of the structure of the statement of funds. In so far as the available data make this

WYMAN COMPANY
Funds Statement
Year Ended December 31, 1950

Net Sales and Other Earnings			$2,459,000
Current Outlays for Expenses, Taxes, and Interest			2,138,000
Funds Available from Operations			$ 321,000
Disposition of Capital Assets—Net Proceeds:			
Sale of Equipment		$ 5,000	
Collection of Real Estate Bonds		30,000	35,000
Funds Available from Operations and Conversions			$ 356,000
Dividends on Preferred Stock			14,000
Balance of Funds from Operations and Conversions			$ 342,000
Financing:			
Bonds Issued—Proceeds	$330,000		
Common Stock Issued during Year—Proceeds	225,000	$555,000	
Payments to Retire Preferred Stock	$201,000		
Outlay for Fees, Commissions, etc.	5,000	206,000	349,000
Funds Available for Expansion and Investment			$ 691,000
Cost of Additions to Buildings and Equipment		$ 10,000	
Amount Invested in Hart Co. Stock		640,000	650,000
Increase in Working Capital (see schedule)			$ 41,000

WYMAN COMPANY
Comparative Schedule of Working Capital
Years Ended December 31

	1949	1950
Cash	$ 122,000	$ 93,000
Marketable Securities		65,000
Receivables (net book value)	268,000	264,000
Inventories	860,000	888,000
Prepayments	26,000	28,000
Total Current Assets	$1,276,000	$1,338,000
Current Liabilities	490,000	511,000
Working Capital	$ 786,000	$ 827,000
Increase in Working Capital, 1950	41,000	
	$ 827,000	

possible the gross amounts of all funds received and all funds utilized are reported. Dividend charges, it should be noted, are shown as a deduction from "funds available from operations and conversions." This arrangement serves to bring out the fact that other funds than those represented by revenues may be used, in particular periods, to meet dividend requirements. The change in working capital is shown as the reconciling figure, the final resultant of all changes. Were there a decrease in net working capital the amount would be shown as one of the elements contributing to "funds available from operations and conversions."

To make the derivation of the figures used in the funds statement prepared in this case entirely clear a few explanations are in order. The figure for "net sales and other earnings" is the sum of the amounts given in the income-statement data under "net sales," "interest and rentals earned," and "dividends earned on Hart Co. stock." The total of "current outlays. . . ." is cost of sales as reported, $2,305,000, plus the sum of taxes, $53,000, and interest charges, $15,000, and less the sum of the depreciation charge for the year, $200,000, and the loss on equipment retired, $35,000. The charge for depreciation included in expenses is assumed to be the equivalent of the credit to the allowance as given. This assumption would seldom be completely justified, particularly in view of the probable variation in the amount of depreciation charges included in opening and ending inventories. A more precise treatment would show the amount of depreciation in inventories as a conversion of fixed assets into current. The entire effect of the retirement of equipment can be reconstructed in the following entries:

Cash	$ 5,000	
Allowance for Depreciation	30,000	
Retirement Loss	35,000	
Buildings and Equipment		$70,000

The premium on preferred stock retirement is dealt with as a part of the total cost of such retirement. The proceeds of the bonds issued amount to $330,000, par less the discount item of $5,000. Since this discount applies to bonds issued as of the end of the year it is assumed that no accumulation of discount has been included in interest charges.

The increase in "capital contributions," accompanied by an equal change in the land account, has no effect upon the movement of funds and hence is ignored in the statement. Similarly the transfer from "appreciation" to earnings has no bearing upon funds either made available or applied.

As indicated here, the condensed statement of funds should always be supplemented by a schedule of working capital.

The example given is not presented as a typical business situation (although the data are adapted from an actual case) but rather as an illustration which includes a considerable range of conditions important in connection with the statement of funds.

Funds Work Sheet. Particularly where the underlying data are extensive a funds work sheet is a useful device in drawing together the material needed for the statement and in promoting accuracy in the handling of the various adjustments. The illustration on pages 838–839 shows the use of a work sheet in the preparation of the statement of funds for the Wyman Co. shown on page 834. In this form of work sheet the comparative position data are included in the first two columns and the increases and decreases for the period under review are listed as debits and credits in the second pair of columns. In the lower section of the third and fourth columns, further, are listed the necessary income data, in debit and credit form, with the balancing adjustment of retained earnings. The form provides six additional columns for adjustments, working capital changes, and the essential resulting material for the funds statement. Additional titles are added at the bottom of the sheet as needed.

The adjustment columns are used for the following more or less distinct purposes: (1) to cancel changes which have no effect upon the movement of funds; (2) to modify particular elements in such manner that the actual effect upon funds is disclosed; (3) to transfer items to

new headings under which funds data may be effectively assembled. The entries in the illustration labeled (1)—which eliminate the changes resulting from the recognition of donated land—belong to the first class. Entries labeled (3) are also cancellation entries (except to the extent of the proceeds of $5,000 disclosed as a source of funds and displayed under a new heading for that purpose), and the elimination of the effect of the transfer of absorbed appreciation to retained earnings—(7)—is a similar type of adjustment. Examples of the second class are found in entries (2), (4), (5) and (6). Entries (8), (9), (10), (11), (12) and (13) represent adjustments which may be placed in the third group listed above. The entire elimination of the increase in accumulated earnings in the position data as a source of funds, it should be noted, is necessary in view of the fact that all funds made available by earnings are being reported under another title.

To what extent should additional headings be appended to the data drawn from statements? The answer is that new captions should be attached in so far as this is necessary in clearly displaying the essential elements of the funds statement. In the illustration the proceeds of bonds issued and the cost of retiring preferred stock, after adjustment, are shown under the corresponding statement titles; new headings might, of course, have been provided. On the other hand the amount representing cost of additions to buildings and equipment is transferred to a supplementary heading instead of being retained on the original line. It is evident that many variations in procedure are possible in a given case.

The last four columns represent a sorting out of the net balances, line by line, of the "changes" and "adjustments" columns taken together. In this connection an extension of the work sheet to include two columns showing these net balances or "adjusted changes" explicitly may be expedient in some cases. The statement of funds itself is evidently based upon the material compiled in the last two columns.

Discussion Statements. The discussion type of statement may be considered an outgrowth of the use of notes and comments in connection with the technical financial exhibits. In this form of statement, when fully developed, the body of the report is a systematic account of the affairs and condition of the enterprise and the tabular presentations of income and other data are relegated to the position

WYMAN COMPANY

Funds Work Sheet, Year Ended December 31, 1950

	Dec. 31, 1949	Dec. 31, 1950	Changes Dr.	Changes Cr.	Adjustments Dr.	Adjustments Cr.	Working Capital Dr.	Working Capital Cr.	Funds Dr.	Funds Cr.
Balance-Sheet Debits										
Cash	$ 122,000	$ 93,000		$ 29,000				$29,000		
Marketable Securities		65,000	$ 65,000				$65,000			
Receivables	293,000	294,000	1,000				1,000			
Inventories	860,000	888,000	28,000				28,000			
Prepayments	26,000	28,000	2,000				2,000			
Real Estate Bonds	55,000	25,000		30,000						$ 30,000
Investment in Hart Stock		640,000	640,000						$ 640,000	
Land	734,000	884,000	150,000			$ 150,000[1]				
Buildings and Equipment	2,180,000	2,120,000		60,000	$ 70,000[3]	10,000[2]				
Organization Costs	5,000	10,000	5,000						5,000	
Goodwill	25,000	25,000								
Bond Discount		5,000	5,000			5,000[4]				
	$4,300,000	$5,077,000								
Balance-Sheet Credits										
Current Liabilities	$ 490,000	$ 511,000		21,000				21,000		
Bonds Outstanding	15,000	350,000		335,000	5,000[4]					330,000
Allowance for Depreciation	713,000	883,000		170,000	200,000[5]	30,000[3]				
Allowance for Uncollectibles	25,000	30,000		5,000				5,000		
Capital Stock—Preferred	200,000		200,000		1,000[6]				201,000	
Capital Stock—Common	300,000	525,000		225,000						225,000
Capital Contributions	252,000	402,000		150,000	150,000[1]					
Retained Earnings	930,000	1,046,000		116,000	116,000[7]					
Equity Adjustment	1,375,000	1,330,000	45,000			45,000[7]				
	$4,300,000	$5,077,000	$1,141,000	$1,141,000						

Income-Sheet Data, 1950			*Dr.*	*Cr.*						
Net Sales				2,400,000	2,400,000[8]					
Expenses (including depreciation)			2,305,000			35,000[3] 200,000[5] 2,070,000[9]				
Interest and Rentals Earned				7,000	7,000[10]					
Dividends on Hart Stock				52,000	52,000[11]					
Taxes			53,000			53,000[12]				
Interest Charges			15,000			15,000[13]				
Dividends on Preferred Stock			14,000						14,000	
Premium Paid on Retirement of Preferred Stock			1,000			1,000[6]				
Addition to Retained Earnings			71,000			71,000[7]				
			$2,459,000	$2,459,000						
Additions to Buildings and Equipment					10,000[2]				10,000	
Proceeds from Sale of Equipment						5,000[3]				5,000
Net Sales and Other Earnings						2,400,000[8] 7,000[10] 52,000[11]				2,459,000
Current Outlays for Expenses, Taxes, and Interest					2,070,000[9] 53,000[12] 15,000[13]				2,138,000	
Increase in Working Capital								41,000	41,000	
					$5,149,000	$5,149,000	$96,000	$96,000	$3,049,000	$3,049,000

of reference material. The annual reports to stockholders of many of the larger corporations are illustrative of the drift toward discussion and explanation rather than columnar sheets and schedules as the primary feature. Such reports, of course, often deal at some length with the physical volume of business, industrial relations, number and distribution of stockholders, developments in the industry, political conditions, and various other matters somewhat outside the bounds of financial disclosure and interpretation.

Discussion is essential to the effective interpretation of financial standing and operating data, especially in connection with comparative reporting. The standard form of comparative report, in fact, might well consist of a systematic write-up of the results of a careful analysis of the available data, with the condensed statements attached as supporting schedules. In this connection it should be pointed out that the importance of arrangement per se in the compilations of underlying data is minimized by the use of the discussion type of report.

The following hypothetical example will serve to suggest the character of the discussion income report which emphasizes comparative data:

M Company

Income Analysis, Year 1950

As shown by the attached comparative data the total revenue for the year was $960,000, an increase of 20% over the net sales of 1949. Selling prices for 1950, however, averaged about 10% higher than in the preceding year, and the increase in the physical volume of business was accordingly measured by sales of around $80,000, in terms of current prices. The increase in costs, unfortunately, was more marked than the growth of revenue. Manufacturing cost increased 25% to $600,000 and total expenses amounted to $770,000, an increase of $150,000 (over 24%). The ratio of total expenses to sales, which stood at 77.5% for 1949, has risen to 80.2% in 1950. This somewhat unfavorable development is primarily due to the comparatively rapid advance in labor costs, discussed in some detail elsewhere. With taxes included the ratio of charges to sales increased from 86.9% to 89%.

Net income (after taxes but before interest) was $110,000 as compared with $145,000 in 1949. However, the earnings of last year included the effect of income on security sales of $40,000 and the corresponding figure for the current year was only $5,000.

Net earnings on the stock equity increased from $70,000 to $85,000. But this does not mean an actual increase in earning power. Interest charges for 1950 were decreased by $50,000 as compared with 1949 and this was due almost entirely to the conversion during the year of the major part of the Company's debentures into capital stock. Taking into account the effect of this transaction the earning

rate on the average book value of the total stock equity, including earnings invested in the business, fell from approximately 5% in 1949 to approximately 4% in 1950. The conversion of the bonds is also reflected in the increase in dividends from $40,000 to $80,000. The annual rate of $2 per share was maintained in 1950, but the amount of earnings retained fell from $30,000 in 1949 to $5,000 in 1950. Continuation of the present dividend rate cannot be expected for long unless operating conditions improve.

Comparative Income Data

Years Ended December 31

	1949	1950	Changes
Net Sales	$800,000	$960,000	$160,000
Income from Security Sales	40,000	5,000	35,000*
Revenues and Other Income	$840,000	$965,000	125,000
Manufacturing Cost	$480,000	600,000	120,000
Selling and Delivery Expense	90,000	110,000	20,000
General Administration	50,000	60,000	10,000
Expenses	$620,000	$770,000	150,000
Taxes	75,000	85,000	10,000
Total Expenses and Taxes	$695,000	$855,000	160,000
Net Income (before interest)	$145,000	$110,000	35,000*
Interest on Bonds and Notes	75,000	25,000	50,000*
Earnings of Stockholders	$ 70,000	$ 85,000	15,000
Dividends	40,000	80,000	40,000
Earnings Retained for Year	$ 30,000	$ 5,000	25,000*

* Decrease.

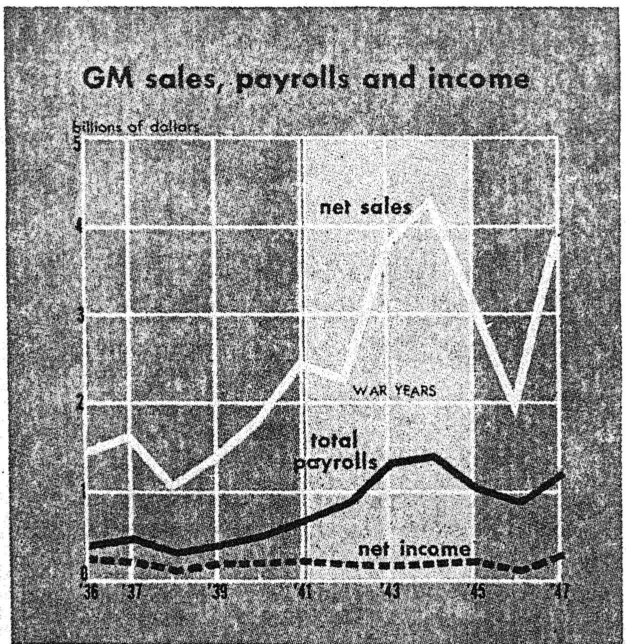
A comprehensive report of this character would include (in addition to the income-statement analysis) a survey of comparative position data (with special attention to working capital and solvency conditions, plant expenditures and retirements, and changes in capital and retained earnings), and an examination of activities and conditions from the standpoint of the statement of funds.

The discussion statement, with its elastic, non-technical form, is a decidedly helpful device and its use should be extended by accountants.

Graphic Reporting. The well-constructed graph or chart often is more satisfactory than a tabular statement of figures as a means of calling attention sharply to particular relationships or trends, and such devices are being used by a considerable number of companies in financial reporting. This does not mean that the graph can supplant other methods of presentation, or that it can reasonably be viewed as of fundamental importance to the accountant. Charts,

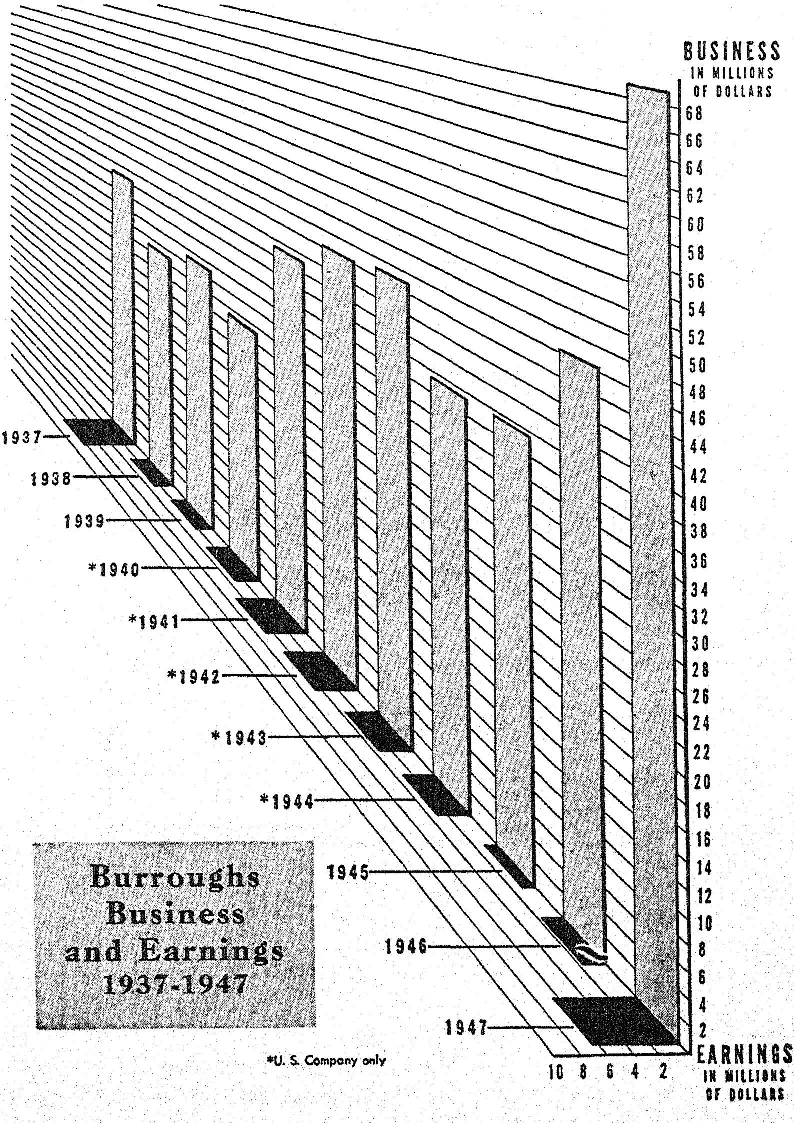
diagrams, and the like should be employed purely as supplementary aids designed to make the facts shown by the regular statements more intelligible and impressive.

Probably the most common form of graphic presentation is the curve chart. This type of chart consists essentially of one or more continuous lines connecting various plotted points representing values or amounts through two or more periods. The amounts and trends of revenues and expenses, in totals or by major classes, are



often compared by this means. Seasonal fluctuations of a particular factor for successive periods can likewise be shown effectively through the use of superimposed curves, distinguished by means of color or other characteristic. As a rule not more than three or four curves can be clearly presented in a single chart. See example taken from a report issued by General Motors.

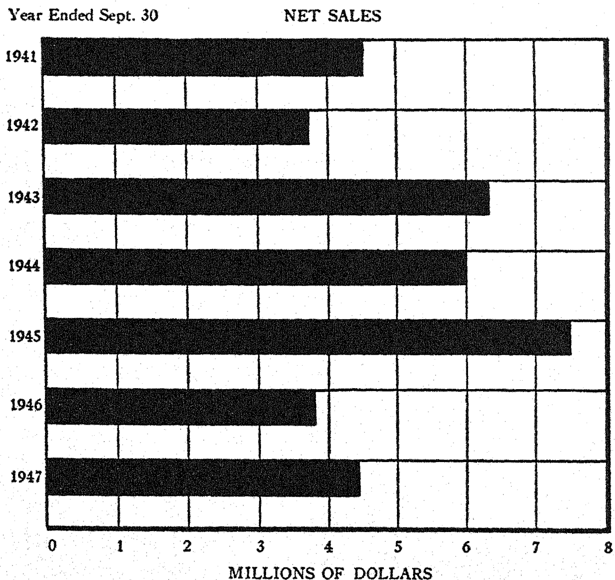
The column or "staircase" chart is another familiar method of presentation. Through the separation of columns into sections, variously colored or shaded, or through the use of two or more columns for each period, comparisons of related factors are readily



*U. S. Company only

made by means of column charts. See illustration from an annual report of Burroughs. Turned so that time is measured vertically and amount horizontally the column chart becomes the so-called "bar" chart. See showing of net sales from report of Michigan Steel Tube Products.

Other forms of graphic presentation include: the strata chart, essentially a curve chart with component areas colored or shaded; the "pie" chart, a popular form of showing comparisons by relative areas; the map chart, not particularly useful in connection with financial

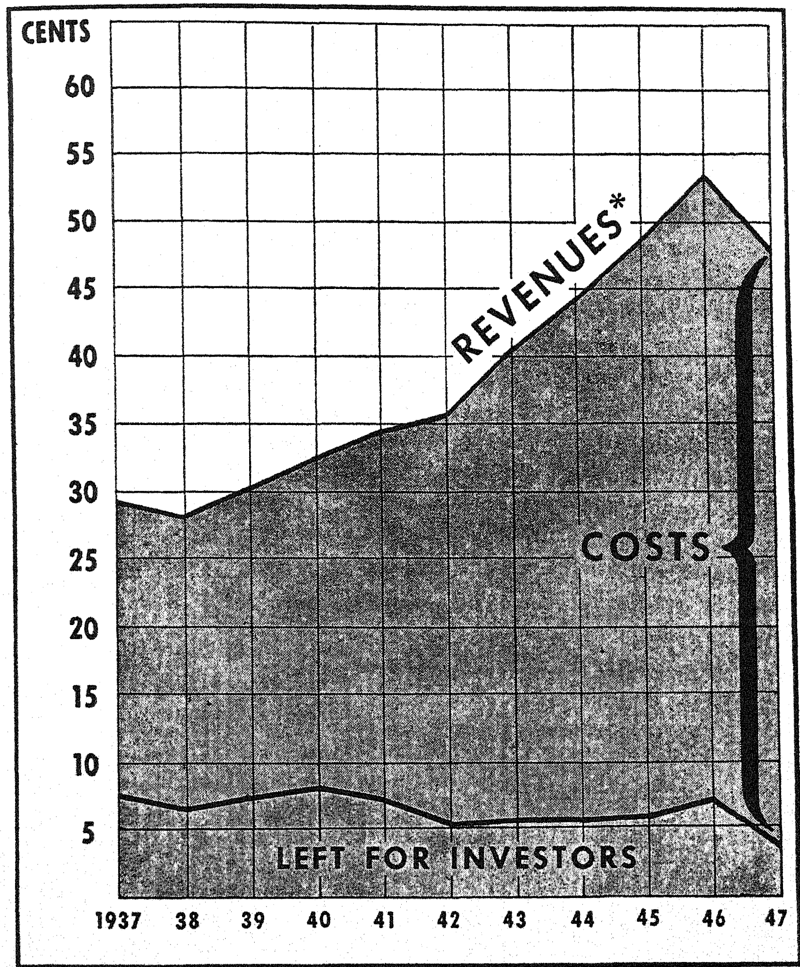


statements. See examples of strata chart and "pie" chart from reports of Michigan Bell Telephone and Doehler-Jarvis, respectively.

Significance of Changing Price Levels. The yardstick employed by the accountant in his effort to record and interpret the financial affairs of the business enterprise is the dollar, and unfortunately this yardstick is not a stable, unchanging quantum as are the standard units used in physical measurement. The value of the dollar, its purchasing power in terms of the general price level, is a continuously fluctuating amount, and in times of major price movements such value may be doubled, or cut in half, in a period of two or

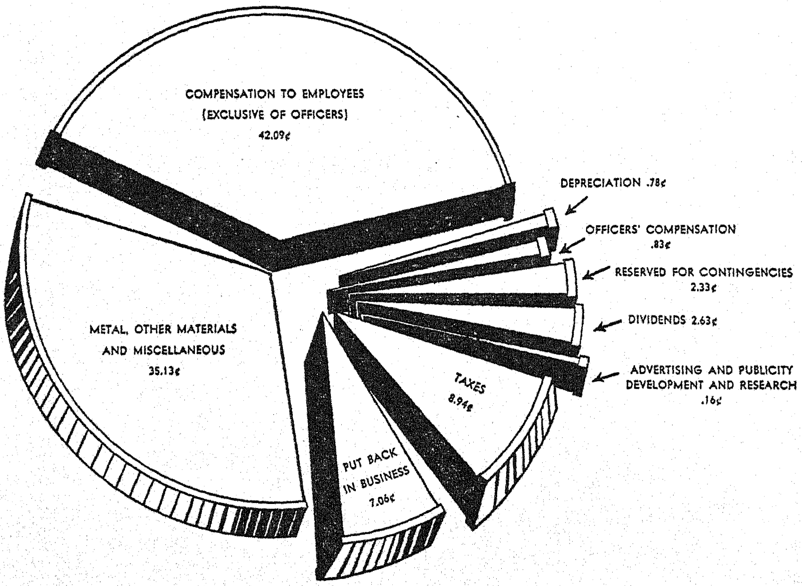
REVENUES, COSTS AND EARNINGS

Per Investor's Dollar in the Business



three years. This means that the data resulting from the use of conventional accounting procedures and rules of valuation may be subject to serious limitations as expressions of true costs and may furnish no evidence whatever of certain important types of gain or loss.

To indicate sharply the inadequacy of unadjusted dollar data compiled during a period of marked change in the price level attention may be directed to the accounts which purport to show the cost of plant assets. The buildings account of the M Co., for ex-



ample, shows total costs incurred of $1,500,000. This total, however, is made up of acquisitions at three dates of $600,000, $300,000 and $600,000. In terms of the general price level, and using prices of the first acquisition date as a base, the value of the dollar—it may be assumed—was $1, 80¢, and 50¢ on the three successive dates. Let us assume, further, that at the present time the value of the dollar has fallen to 40¢ in terms of the price level at the first acquisition date. It follows that to state now that the Company's buildings cost $1,500,000 "dollars" is misleading. Three different kinds of dollars are involved in the acquisitions and still another dollar is being used

currently. To make a proper statistical summation under these conditions requires conversion to a common base. Following are two illustrative conversions:

Using dollars of first acquisition date as base		Using present dollars as base	
$600,000 × 1.00 =	$ 600,000	$600,000 × 2.50 =	$1,500,000
300,000 × .80 =	240,000	300,000 × 2.00 =	600,000
600,000 × .50 =	300,000	600,000 × 1.25 =	750,000
	$1,140,000		$2,850,000

According to these computations the cost of the buildings in terms of dollars at first acquisition date is actually $1,140,000, and in terms of present dollars, $2,850,000. And the amount in the accounts, $1,500,000, is not a correct statement in terms of dollars at any date.

In such a situation the depreciation estimates based on book costs are evidently a conglomeration of unlike dollars, and charging revenues representing current dollars with such a mixture gives periodic results which defy clear-cut interpretation.

In attempting to deal with this problem the accountant is embarrassed by the fact that the law in general fails to acknowledge the phenomenon of a variable unit of monetary measure. The accountant, in other words, is coerced in some measure by the framework of contracts and legal institutions in which the business enterprise—his immediate field of activity—exists; he must report contractual earnings, amount subject to income tax, amount available for dividends, capital stock, retained earnings, etc., in the first instance at any rate, in accordance with impinging legal requirements. At the same time the accountant is coming to be depended upon more and more an an interpreter of the essential economic conditions of the enterprise for the purpose in particular of assisting owners and managers in making decisions. And it is plain that he cannot fulfill his function adequately and remain blind to the limitations of the conventional accounts and reports in the face of a varying dollar. In some cases, without doubt, a sustained movement of the price level has a more important effect upon the welfare of the enterprise than any other influence, and in such circumstances it is surely the duty of the accountant to see to it that the management is made fully aware of the underlying developments.

Granting the importance of changes in the value of money to the business enterprise there remains the practical problem of reporting

such changes. The use of an elaborate system of supplementary accounts and reports providing for revision of each entry in the records at short intervals in terms of weekly or even monthly price indices is hardly practicable at present. What is needed in most situations is a special analysis and report supplementing the periodic statements, particularly when in comparative form, designed to trace the main effects of general price movements upon the affairs of the enterprise. Further, except in periods where the change in dollar value is sharp and prolonged as a result of major economic fluctuations and accompanying monetary tinkering the case for giving explicit attention to the problem is not very strong.

Assuming that it is desired in a given case to present a common-dollar comparative report, to supplement the conventional statements, what period should be used as a base? No hard and fast answer can be given. It seems fair to assume, however, that throughout the business field the dollar is commonly thought of in terms of the prevailing price level. That is, while conceptions of the monetary unit are often anything but clear-cut there is reason for believing that most persons adjust their impressions of the dollar rather promptly as prices rise or fall. It follows that reports showing adjusted dollars are likely to be more understandable if expressed in the prevailing price level.

Working Capital and Changing Dollar Value. Losses and gains in purchasing power, not disclosed by conventional accounting methods, undoubtedly arise in connection with the various elements of working capital during a period of changing prices. Cash, for example, is assumed to have a constant value subject only to variation in the number of dollars involved although the value of cash as purchasing power clearly fluctuates with the level of prices. The same is true of accounts receivable and all other claims to dollars; apparently having fixed values (ignoring adjustments for interest, bad debts, etc.) they actually have variable values due to the instability of the measuring unit, the dollar. Accounts payable and other liabilities expressed in dollars, and maintained without revaluation in the accounts, are likewise variable in terms of the amount of purchasing power required for their satisfaction, although the effect of the fluctuations upon the welfare of the enterprise is in this case the opposite of that arising from changes in the value of cash and receivables.

Attention should be directed to the fact that all elements of working capital consisting of cash itself or of unqualified dollar contracts receivable or payable are continuously and automatically converted into current dollars. A bank balance of $50,000, for example, is correctly reported at that figure, regardless of the course of prices during the period of its accumulation; at all times such a balance represents 50,000 legal dollars and can command goods and services to this amount at current prices. Similarly a liability of $50,000 in notes payable is a claim for the stated amount of dollars, without reference to their value, and is accordingly a "self-adjusting" element. This does not mean that the amount of periodic loss or gain in purchasing power is disclosed by the automatic conversion. To determine this fact it is necessary to trace the recorded amounts from the beginning to the end of the period in terms of like dollars.

The fact that the gain or loss on payables is an offset to the loss or gain on cash and receivables deserves emphasis. Suppose, for example, that a particular concern has a bank balance of $100,000 and owes $50,000 on open account. As long as this condition obtains the liability represents a form of "hedge" against a change in the purchasing power of cash. If at the outset the index of prices stands at 100 and at the end of the period is 120, the purchasing power of the bank balance has been decreased by one-sixth, $16,666⅔ in terms of dollars as of the first date and $20,000 in terms of dollar value as of the second date. This loss is partially offset, however, by the fact that the amount of purchasing power required to satisfy the liability of $50,000 has been reduced by $8,333⅓ in old dollars and $10,000 in new dollars. Similarly if the price level had fallen the gain in cash purchasing power would be accompanied by an increase in the amount of such power required to meet or support the outstanding obligations.

Effect of Changing Dollar on Fixed Liabilities. Bonds and other long-term liabilities are generally nothing more than claims to dollars, and their significance to the enterprise accordingly varies directly with the change in the value of money. Herein lies a very important long-run source of gain or loss, not brought to light as such by ordinary accounting methods and not clearly recognized by either investors or business managements. Emitting a large issue of bonds is equivalent to engaging in a serious speculation in money. If the value of the dollar falls the amount of purchasing power

necessary to retire the obligation is correspondingly reduced, and if dollars become more valuable, as reflected in the price level, a larger amount of actual resources will be required to liquidate the liability. Suppose, for example, that a corporation puts out an issue of ten-year bonds amounting to $100,000,000 at a time when the price index stands at 100, and that at maturity when the debt is paid the index has advanced to 200. The result of this transaction is a gain of $50,000,000 measured in terms of dollars as of date of issue and $100,000,000 expressed in money value as of date of maturity. And similarly if the bonds were issued when the index stood at 200 and were paid in dollars represented by an index of 100 a genuine loss of purchasing power amounting to $100,000,000 in prices of date of issue or $50,000,000 in prices of date of payment would have been suffered.

In view of the hazards involved, including danger of complete loss to stockholders as a result of default during a period of lean years, it is difficult to find adequate justification for the widespread practice of employing long-term dollar contracts in financing business undertakings.

Conversion of Position-Statement Data Illustrated. The M Co. begins business on January 1 with cash of $15,000, inventories of $20,000, equipment of $5,000, accounts payable of $10,000, and capital stock of $30,000. For the sake of simplicity all of these balances are assumed to be the result of transactions occurring on the opening day. The index of prices at this point stands at 100. On December 31 the Company's position statement shows the following: cash, $10,000; accounts receivable, $20,000; inventories (at cost), $40,000; equipment (at cost), $7,500; allowance for depreciation, $625; accounts payable, $35,000; capital stock, $30,000; retained earnings, $11,875. The index of prices at this time is 124, and the index for each half month through the year is one point higher than the preceding index beginning with January 15 at 101. The following assumptions are made with respect to balances of December 31 and activities for the year: (1) all purchases, sales, liabilities incurred, expenditures, receipts, etc. occur at a uniform level throughout the year, except that the additional equipment purchased at a cost of $2,500 is acquired on July 1; (2) all elements pass through the business in regular order, the oldest item in each case being used or

retired first; (3) the balances of cash, accounts receivable, and accounts payable originate in December; (4) the inventory consists of December purchases, $35,000, and November purchases, $5,000; (5) there have been no disbursements to stockholders. Under these conditions the comparative position data are converted into December 31 dollars as shown below.

M COMPANY

Comparative Position Data, January 1 and December 31, 19—
With Conversions into Year-End Dollars
(Indexes: Jan. 1, 100; Dec. 31, 124; Average for Year, 112)

	Balances per Book			Balances in 12/31 Dollars		
	Jan. 1	Dec. 31	Increase	Jan. 1	Dec. 31	Increase
Cash	$15,000.00	$10,000.00	$ 5,000.00*	$18,600.00	$10,000.00	$ 8,600.00*
Accounts Receivable	——	20,000.00	20,000.00	——	20,000.00	20,000.00
Inventories	20,000.00	40,000.00	20,000.00	24,800.00	40,408.52	15,608.52
Equipment	5,000.00	7,500.00	2,500.00	6,200.00	8,967.86	2,767.86
Allowance for Depreciation	——	625.00*	625.00*	——	758.39*	758.39*
	$40,000.00	$76,875.00	$36,875.00	$49,600.00	$78,617.99	$29,017.99
Accounts Payable	$10,000.00	$35,000.00	$25,000.00	$12,400.00	$35,000.00	$22,600.00
Capital Stock	30,000.00	30,000.00	——	37,200.00	37,200.00	——
Retained Earnings	——	11,875.00	11,875.00	——	11,875.00	11,875.00
Conversion Adjustment	——	——	——	——	5,457.01*	5,457.01*
	$40,000.00	$76,875.00	$36,875.00	$49,600.00	$78,617.99	$29,017.99

* Deduction.

A few comments on the calculations made in the preparation of the schedule are in order. The book balances on January 1 are converted by multiplying in each case by 124/100, the percentage of the index on December 31 to that of January 1. The balances of the self-adjusting elements, cash, accounts receivable, and accounts payable, on December 31 are already expressed in dollars of that date and hence require no conversion. The cost of the inventory on December 31 is converted to current dollars by multiplying the amount originating in December, $35,000, by the index on December 31, 124, divided by the average index for December, 123, and

adding to this result the cost of the amount acquired in November, \$5,000, multiplied by the ratio of the final index, 124, to the average index for November, 121. (This is not precisely accurate, as the portion of November purchases on hand was presumably acquired toward the end of the month.) The converted equipment account on December 31 is the sum of \$6,200, the amount of the cost of the opening balance in terms of the price level at the end of the year, and \$2,767.86, the cost of the addition of \$2,500 on July 1, when the index stood at 112, multiplied by 124/112. Of the credit to the depreciation allowance for the year, 10% of the original balance plus 5% of the addition, that applicable to the opening balance, \$500, is converted by multiplying by 124/100, and that applicable to the addition is converted by multiplying by the ratio 124/112. The result, \$758.39, is the sum of 10% of the converted original balance, \$620, plus 5% of the converted cost of the addition, \$138.39. The capital stock item of \$30,000 is converted through the use of the ratio 124/100. The amount of retained earnings is permitted to stand at the book figure so that the net amount of the adjustment resulting from a comparison on a common-dollar basis can be shown in full.

The principal point brought out by the stabilized comparative figures for this hypothetical example—and which might well be introduced into a discussion report of activities—is the fact that while the stockholders' equity shows a total net increase of \$13,617.99, which exceeds the increase recorded on the books by \$1,742.99 (the net amount by which the converted asset costs exceed recorded dollar costs), the amount of increase remaining after stating the capital investment in current dollars is only \$6,417.99, or \$5,457.01 less than the earnings shown by the unconverted accounts. The increase in stock equity reported as net income, in other words, is found to consist in considerable measure of dollars necessary to maintain the capital investment intact in terms of purchasing power. The statement also shows that increases and decreases in balances as they appear on the books are considerably in error in a number of instances from the standpoint of comparison on a common-dollar basis. It brings out the fact, moreover, that the recorded figures for equipment cost and depreciation do not correctly express such factors in current dollars, notwithstanding the short period of time involved. The converted inventory figure for December 31, evidently, is not greatly different from the recorded cost.

Questions

1. Define the funds statement and explain its significance. What form is most suitable for this statement?

2. List the principal sources and applications of funds.

3. How is the working-capital picture usually handled in preparing the statement of funds?

4. Give examples of charges to revenue which do not represent, currently, a utilization of funds.

5. Discuss and illustrate the relation of changes in plant accounts to the funds statement.

6. How should each of the following be dealt with in the statement of funds: (1) land appreciation; (2) realized appreciation; (3) loss on sale of fixed assets; (4) discount on new bond issue; (5) periodic accumulation of bond discount; (6) stock dividends; (7) increase in allowance for bad debts; (8) increase in reserve for contingencies; (9) commissions paid in connection with security issue; (10) long-term receivables acquired in connection with sale of plant; (11) issue of stock to bondholders exercising a conversion privilege.

7. Describe the funds work sheet. What are the purposes of the adjusting entries on such sheets?

8. Explain what is meant by the "discussion statement." Indicate the special advantages of this method of reporting.

9. What are the principal points to be covered in a comprehensive analysis based on comparative financial data?

10. What is meant by "graphic reporting"? Name a number of devices employed in this connection and explain their application.

11. "In many cases the recorded cost of plant is a meaningless hodge-podge of unlike units." Explain. How may such an account be converted to a common denominator?

12. "In view of the fact that the law fails to recognize the variable character of the dollar the accountant cannot do so." Discuss.

13. In the conversion of comparative financial data to common dollars what period should be selected as a base?

14. With an illustration show how an enterprise may suffer an unrecorded loss in effective working capital as a result of a general price movement. In what sense are liabilities a "hedge" in this connection?

15. "In the case of cash and accounts representing dollar contracts the process of conversion to current dollars is automatic and continuous." Explain.

16. "Emitting an issue of long-term bonds constitutes a serious speculation in the value of money." Illustrate.

17. Outline the procedure required in converting comparative position data into common dollars. Give illustrative computations.

INDEX